CITY OF DURBAN

Annual Report

OF

CITY MEDICAL OFFICER OF HEALTH

YEAR ENDING 31st DEC. 1956

DURBAN CORPORATION

ANNUAL REPORT: 1956

INTRODUCTION

REPORT 'A'

REPORT 'B'

ANNEXURE

City Health Department,

640 Smith Street,

DURBAN

21st October, 1957

To His Worship the Mayor and
Councillors of the City of Durban.

I have the honour to present the fifty-fourth Annual Report on the activities of the City Health Department for the year 1956.

As explained last year, the Annual Reports of this Department, following a request from the Union Department of Health, now cover the period represented by a calendar year instead of, as formerly, by a municipal year. This document is the second Annual Report to be issued under the new procedure.

Obituaries

It is with deep regret that I record the death of Dr. G.H. Gunn, my predecessor in office, on the 2nd July, 1956. Dr. Gunn had only retired as City Medical Officer of Health on the 17th July, 1955, and it is sad to think that he was spared only a little under a year to participate in his well-earned retirement from his duties. Some details of Dr. Gunn's public health career were furnished in last year's Annual Report but here it may again be recorded that he served the City for almost thirty years, having joined the Department as Assistant Medical Officer of Health on the 13th November, 1935. Almost four years later, on the 1st August, 1929, he was appointed City Medical Officer of Health.

During March, 1956, the City also lost another senior public health official by the death in retirement of Mr. Robert Walker who had served the town with zeal and distinction for a great number of years. Born at Largs, Ayshire, on the 14th October, 1875, Mr. Walker, at an early age, moved to Paisley where, in later years he joined the local Public Health Department. During 1903, he was selected overseas to fill the post of Special Sanitary Inspector in the Durban Public Health Department and commenced his new duties on the 6th June of that year. He was appointed Chief Health Inspector on the 1st August, 1920, and retired from this position on the 13th October, 1935. After the outbreak of hostilities he rejoined the service in June, 1940, as Acting Cleansing Superintendent and relinquished this appointment in February, 1946.

Representative of an older school, Mr. Walker was a man of high integrity with a keen sense of responsibility. As a sanatarian he was in the first rank and he also displayed great ability as an administrator. Advice on all aspects of his speciality were keenly sought and freely given and many past and present members of the Department, including the writer, have good cause to be grateful to him as a teacher.

Three years before he died, Mr. Walker, at the instigation of this office, wrote his reminiscenses as a member of the Department. These have been included in this Report as an Appendix in the belief that they will be read with interest by serving and future health officials in this Province, and possibly, by those further afield.

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Accommodation

For many years the staff of the Department has worked under cramped and unsatisfactory conditions. In January, a portion of the Old Infants' School adjoining the offices of the Department was placed at its disposal for expansion purposes. Whilst this move relieved the situation only to a certain extent, it at any rate permitted the transfer of the Child Health and Immunisation Clinics to new quarters, and this, in turn, helped to ease the congestion in other sections of the Department. It was only by the acquisition of more accommodation that it became possible to hold poliomyelitis immunisation sessions at the Gale Street premises.

Clinic Premises

During the year the Union Department of Health offerred a portion of the Springfield Health Centre to the Department for the purpose of establishing a child hygiene clinic. The Public Health Committee resolved that this offer be accepted provided only a nominal rental was charged.

Investigations were also conducted by the Department into the possibility of acquiring a suitable site for clinic premises in the vicinity of the junction of the Sea Cow Lake and North Coast Roads, but, by the end of the year, no such site had been found. Consideration was also given during 1956 to the acquisition of clinic premises in the Sparks Estate Coloured Housing Scheme and at the Umlazi Glebe Lands.

Kwa Mashu

Preliminary discussions with the Native Administration Department were held during the year for the purpose of formulating plans for the public health control of this new Bantu township.

Medical School

In January, the City Medical Officer of Health was appointed Honorary Senior Lecturer to the Department of Social, Preventive and Family Medicine of the School and also Honorary Consultant to the Institute. Arrangements were also approved by the Council for the students of the School to attend lecture/demonstrations at Municipal establishments as part of their practical course in the subject of public health.

Pathological Laboratory Services

Dr. B.F.Sampson, who had been associated with the Department since May, 1945, as part-time Municipal Pathologist, terminated his contract with the City Council with effect from 30th September, 1956. The basis for the provision of laboratory services was revised to meet present-day needs and Drs. R.Elsdon-Dew and G.A.Drummond were appointed as part-time Municipal Pathologists by the City Council on 29th October, 1956.

Re-organisation of Administration Section

After an exhaustive investigation "on the spot" by the Municipal Service Commission, the City Council approved of a scheme for the re-organisation of the Administration Section, including certain staff augmentation, with effect from 1st August, 1956.

Departmental Committee of Enquiry: Control of Bovine Tuberculosis in South Africa

The City Council appointed the City Medical Officer of Health, the Director of the Municipal Abattoir and Chief Veterinary Officer

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and the Veterinary Medical Officer, City Health Department, as its technical delegates to lead evidence in Durban before this Committee of Enquiry and, in this connection the Department completed a questionnaire for the information of that body. The Departmental Committee of Eqnuiry visited Durban at the end of April, 1956.

Establishment of Virus Laboratory

At the beginning of 1956 the Department was advised that a Government Virus Laboratory had been established in Durban. This represented a most important public health asset not only for the City, but also for the whole of the Province.

Health Congress

The Fourteenth Annual Congress of the Health Officials' Association of Southern Africa was held in Durban from the 22nd to the 26th October, 1956. It was the largest Public Health Congress ever held in South Africa and was attended by over 300 delegates including representatives from the Rhodesias. Needless to say, it was a highly successful meeting.

Domicile of Bantu Hospital Patients

During the year it emerged that it is a common practice amongst Bantu patients who seek treatment at the King Edward VIII Hospital and who arrive from various parts of Natal - and even further afield - to give their home address as Cato Manor. Sometimes the reason for this is evidently to avoid any questions being raised as to why they have by-passed other hospitals en route; in others, of course, a Cato Manor address is tendered because such patients have taken up temporary residence with relatives and friends in the area prior to their admission to hospital. However, whatever the reason, it is clear that Cato Manor for a long time has been an address of convenience for many ex-City patients.

On account of this fact, it is quite impossible to make accurate deductions from the hospital records as to the incidence of certain diseases and disorders, e.g. infantile diarrhoea and malnutrition, amongst Cato Manor children unless the correct domicile of each and every patient is fully investigated. If this is not done, Cato Manor is liable to be stigmatised for a certain amount of illness that should properly be referred to other districts.

Tuberculosis and Cato Manor

Owing to the high repute in which Durban's hospitals and the Chest Clinic are held by the Bantu throughout Natal, Zululand and East Griqualand, there is a constant influx of such cases to the City. Unfortunately, many squat at Cato Manor and, collectively, these cases represent a serious public health hazard to the City as it is difficult to take measures to effect their return to their homes.

Bantu Vital Statistics

Whilst the number of Bantu deaths is probably as correct as those recorded for other racial groups, in the case of a considerable number of infants essential information is not forthcoming. For instance, in an area such as Cato Manor, when the South African Police are satisfied that a death in an infant is due to natural causes, a burial certificate is issued. However, no investigations are carried out to ascertain whether the death has occurred in a local resident or a visitor nor are any steps taken to discover the true cause of death. In many cases the cause is simply shown as "unknown" or as

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"heart trouble", "chest trouble", "cough trouble", "sharp pains", "pains in body", "nerve pains", "probably fever" and so forth.

This surely is an unsatisfactory state of affairs from the medico-legal angle: but on top of this, it means that no worthwhile figures can be drawn up from the viewpoint of public health statistics.

When Bantu births are considered the situation is just as misleading. The registration of births for all races in Durban is now compulsory but despite this, in the Cato Manor area, very few births taking place in the area are registered. Even where a birth is registered, no steps are taken to ascertain the mother's place of domicile and so establish whether she is a local resident or only a visitor to the area.

From the foregoing it will be at once obvious that any figure computed by this Department, for instance for Bantu infantile mortality, is subject to so much error that it must at once be discounted.

It is quite clear that when the inhabitants of the shack settlements have been evacuated to Kwa Mashu, registrations of both births and deaths will be placed on a much better basis, and rates of a more dependable character, ascertainable.

A Bantu Slant

The following is an extract from the 1956 Annual Report of the Durban Bantu Child Welfare Society:

> "One of the greatest problems is that of illegitimacy and the alarming acceptance of this in a community which, hitherto, by tradition conformed to rigid patterns of morality. It is as though members of the older generation, in the hopelessness of a situation they can do little to avert, reluctantly accept it as a consequence of life under urban conditions. Grandmothers struggle against bitter odds to bring up large families of children, the illegitimate offspring of their daughters. This social evil is not confined to the "lower" strata of the community, but is found in an ever-increasing degree amongst educated African women."

The report then details the causes for this state of affairs, all of which, of course, also have a marked effect on the public health of the community. But the high rate of illegitimacy must in itself have a direct bearing on the security, welfare, health and happiness of the unfortunate infants born into such an unstable environment. Often unwanted by their poverty-stricken parents, many of these children become the victims of malnutrition.

Public health administration is difficult enough having regard to the adverse conditions under which the slum-dwellers live, but when it has, in addition, to contend against such factors as ignorance, superstition, drunkenness, primitive practices, gambling, and the temptations of the hire-purchase system, its task becomes formidable. What is probably needed more than anything else amongst the Bantu is the fostering of a spirit of self-help and self-reliance, a greater sense of responsibility and a more rapid development of a community spirit. If these can be achieved, they will do much to elevate the public health standards of the urban Bantu. Kwa Mashu will undoubtedly afford the opportunity for the establishment of a stable family life: let us hope that, at the same time, it will lead to the achievement of the desiderata mentioned above and the exercise of greater parental control.

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Appreciation

I wish to thank the Chairman and members of the Public Health Committee for their kindly support during the year under review. To the members of the Department, both European and non-European, I extend my grateful thanks for their loyal services and high standard of efficiency. To the Heads of Departments and their staffs and to the members of the Municipal Service Commission I express my keen appreciation for their ready co-operation and kindly consideration at all times. Lastly to the Durban Press and the South African Broadcasting Corporation, I extend a special word of thanks - ever ready to place their facilities at the disposal of the Department in the public interest and always exhibiting a kindly understanding of our public health difficulties and problems, it has been a real pleasure to work with all local representatives of the Press.

I have the honour to be,

Ladies and Gentlemen,

Your obedient servant,

G.D.English, M.B., Ch.B., D.P.H., D.T.M.& H.
CITY MEDICAL OFFICER OF HEALTH

C I T Y O F D U R B A N

REPORT OF THE CITY MEDICAL OFFICER OF HEALTH

for the

YEAR ENDED 31st DECEMBER, 1956

* * *

REPORT 'A'

I. NATURAL CONDITIONS AND STATISTICS

1. Area and Rateable Value

Area of City: 44,927 Acres or 70.2 square miles.

	1956	1955
Annual rateable valuation	£56,803,850	£56,021,410
Gross Value of Land	£95,523,330	£90,901,520
	£152,327,180	£146,922,930

Included in the above values for land and buildings are the following valuations of land and buildings classified as "Agricultural Land".

Land	2,683 Acres	£360,120
Buildings		£16,700

It should be noted that "Agricultural Land" is not subject to the general rate but to a flat rate of 1/- per acre per annum.

2. Geographical Data and Climate

Durban is situated on the coast of the Province of Natal at longitude 31° East and latitude 29°, 52 minutes 30 seconds South. It possesses a large deep water harbour (Port Natal) and is the first port of call in the Union of South Africa of shipping from the Middle and Far East.

The climate and vegetation are sub-tropical with a temperate summer of high humidity and a mild winter. Altitude varies from sea level to over six hundred feet in parts.

Month	Humidity		Barometer		Temperatures (Dry Bulb)			Rainfall Figures		
	Max.	Min.	Max	Min.	Max.	Min.	Mean	*Points	(Ins.)	No. of Days of Rain
January	96	54	30.101	29.804	86	70	78.9	100	(.39)	4
February	91	46	30.204	29.753	88	66	79.1	2047	(8.06)	15
March	100	54	30.254	29.805	88	67	77.4	1964	(7.73)	10
April	100	54	30.345	29.805	78	66	72.1	751	(2.96)	11
May	96	50	30.488	29.853	75	61	68.4	134	(.53)	7
June	100	61	30.451	29.854	72	57	64.2	157	(.62)	7
July	99	72	30.353	29.911	68	58	64.0	134	(.53)	5
August	100	52	30.353	29.864	73	58	66.9	863	(3.40)	7
September	96	58	30.450	29.952	80	59	67.7	928	(3.65)	8
October	99	64	30.321	29.805	77	64	70.5	745	(2.93)	14
November	91	62	30.255	29.848	80	70	74.4	1175	(4.63)	22
December	99	69	30.158	29.820	81	65	73.8	3575	(14.07)	21
Maximum	100	72	30.450	29.952	88	70	79.1	3575	(14.07)	22
Minimum	91	46	30.101	29.753	68	57	64.0	100	(.39)	4

*1 point = 1/10 m.m.

3. Population

The estimated population compared with the 1951 census figures is as follows:

	1951	1956
European	129,227	153,260
Coloured	14,895	19,260
Bantu	134,273	175,880
Asiatic	144,916	171,200
	423,311	519,600

As in previous years the estimate is based on a formula devised by the Director of Census and Statistics.

4. Births

The Department relies largely on births notified under its regulations, rather than on births registered under the Births, Deaths and Marriages Act. By doing so a large number of Bantu and Asiatic births are recorded which would not otherwise come to notice. The great majority of non-European births take place in institutions, and the institution concerned carries out the notification on behalf of the parent.

It will be seen that births recorded were slightly less in number than in the previous year.

(i) Births

Race	Births Registered		Births Notified		Birth Rate per 1,000 Population
	Local	Imported	Local	Imported	(Local)
European	3,120	769	3,005	713	20.36
Coloured	786	46	764	57	40.81
Bantu	-	-	4,922	5,701	27.99
Asiatic	-	-	5,685	394	33.21
All Races	3,906	815	14,376	6,865	27.93

(ii) Illegitimate Births

European	53	or	1.70%
Coloured	139		17.68%
Bantu	2,945		59.83%
Asiatic	69		1.21%

(iii) Still Births

(See Chapter XVII)

5. Deaths

The Department is in the process of improving statistical methods. The measure contemplated is the introduction of punch-card systems. The results however will not begin to become apparent until the year 1957. In the present report therefore only total numbers of deaths are reflected, and no attempt is made to clarify deaths according to cause, age, etc.

Race	Deaths	Crude Death Rate	Infant Mortality Rate
European	1,373	8.96	17.9
Coloured	170	8.83	60.2
Bantu	3,430	19.50	- *
Asiatic	1,661	9.70	70.2
Total	6,634	12.76	

* The registration of Bantu births is too haphazard to allow of even a reputed infant mortality rate.

II. INFECTIOUS DISEASES

(i) Notifiable infectious diseases

No cases of any of the formidable epidemic diseases or of typhus fever were notified during the year.

In association with a generalised epidemic of the disease throughout South Africa, an outbreak of poliomyelitis occurred during the last quarter of 1956. With this exception the City remained free throughout the year from outbreaks of infectious diseases.

Two features in the overall pattern of infectious disease during the year must be noted. In the first place, there was a marked increase in the number of notified cases of scarlet fever as compared with the previous year. Secondly, there was an appreciable decline in the number of typhoid fever cases reported and the total figure for the year was the lowest recorded, with two exceptions, since the incorporation of the Added Areas in 1932. These two exceptions relate to the years 1935/1936 and 1948/1949 when 44 and 48 cases were notified respectively.

The decline observed in 1956 must be regarded as rather remarkable but quite fortuitous when the insanitary state of certain areas of the City and the unhygienic practices of their inhabitants are taken into account

Typhoid

During the year, notifications of City cases numbered 67 as compared with 100 for the year 1955 and 92 for the year 1953/54. These comprised: Europeans 5, Asiatics 9, Coloureds 1, and Bantu 52. The decline was mainly due to a lowered prevalence amongst the Bantu, and, to a lesser extent, amongst the Asiatics.

Thirty-two of the Bantu cases either resided in Cato Manor or regularly visited the area over the week-ends. Of the former group, the length of residence of ten was two years or under. March (7 cases) and August (5 cases) were the two months in which the disease was most prevalent in this district.

The five European cases were notified during the months of January, February, October, November and December. In one case there was suggestive evidence to indicate that the infection was contracted during a visit up-country. In the remainder, the disease undoubtedly originated within the City but despite intensive investigations, no sources of infection were discovered.

Imported cases numbered 124 comprised as follows: Europeans 30, Coloureds 2, Asiatics 16, and Bantu 76. In the previous year the imported European cases were 8.

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Diphtheria

City notifications numbered 195, comprising Europeans 70, Coloureds 13, Asiatics 43, and Bantu 69. The total number of cases for the year was well below those recorded for 1955 and for 1953/1954 when 280 and 260 cases were notified respectively. The decline in the prevalence of the disease was attributable to a lessened incidence amongst the non-European groups of the population.

Amongst the European community the disease was almost as prevalent as it was during 1955 when 75 cases were notified. Whilst, over the years, there has been a considerable improvement in the incidence of the disease amongst European children it is evident that many European parents fail to protect their children by ensuring that they are immunised against the infection. There is really no good reason why the disease should not be almost entirely eliminated from the European section of the population.

The same could be said for all racial sections but amongst the non-Europeans and, especially amongst the Bantu, the situation can possibly be excused on account of their ignorance of the nature and seriousness of the disease and of the modern techniques of prevention. Amongst Europeans, this is certainly not the case. Here apathy and indifference probably play an important part.

Typhus

No cases of epidemic or murine typhus were notified during the year and the continued absence of the latter type of the disease is certainly noteworthy. As recorded in last year's Annual Report the last case of murine typhus was notified in 1952.

Poliomyelitis

Owing to an increase of City notifications during November and December, 1955, the new year commenced with a certain amount of apprehension as to what it held in store. However, except for the month of May during which 10 cases were notified, the City experienced a period of relative freedom from the disease until September when 11 cases were notified. In October 10 cases were reported and it soon became apparent that the City was heading for a full-scale outbreak. In November and December it was well in the throes of an outbreak which formed part and parcel of the general epidemic which was then sweeping throughout the Union.

The notifications for the year totalled 158 i.e. almost double the number for 1955 when the notifications numbered 81. Of the 158 notifications, 103 were received during the last quarter of the year.

Subjoined are a series of tables reflecting the monthly notifications and also the age-group and race distribution of the patients. For ease of comparison, the tables have been drawn up more or less in a similar form to those published in the 1955 Annual Report. It will be observed that during 1956 the incidence amongst the non-European groups was definitely higher than that recorded during 1955 when only 2 Coloureds, 7 Bantu and 3 Asiatics were notified. During 1956 the corresponding notifications were: 18 Coloured, 37 Bantu and 26 Asiatics. It is therefore clear that all racial groups and especially the Coloured - having regard to their numbers - were all more severely attacked during 1956 than during 1955. This indicates a trend which may become more evident as time goes on and certainly underlines the need to ensure that all non-European groups are provided with ample immunisation facilities.

City deaths from poliomyelitis during 1956 totalled 12 as follows: Europeans 7, Bantu 2 and Asiatics 3.

City Poliomyelitis Cases: January to December, 1956

Month	E.	C.	B.	A.	Total
January	3	-	1	-	4
February	6	-	1	-	7
March	2	-	-	-	2
April	2	-	-	-	2
May	6	-	1	3	10
June	2	-	-	-	2
July	4	1	2	-	7
August	4	-	1	-	5
September	4	2	3	2	11
October	5	1	3	1	10
November	12	3	2	5	22
December	32	11	18	15	76
Total	82	18	32	26	158

Age and race distribution

European

Sex	Under 1 year	1 - 4 years	5 - 14 years	15 - 24 years	Over 25 years	Total
Male	3	15	20	4	5	47
Female	2	14	8	5	6	35
Total	5	29	28	9	11	82

Coloured

Male	1	5	1	-	-	7
Female	6	5	-	-	-	11
Total	7	10	1	-	-	18

Bantu

Male	3	10	5	-	-	18
Female	2	9	1	2	-	14
Total	5	19	6	2	-	32

Asiatic

Male	5	10	4	-	-	19
Female	-	7	-	-	-	7
Total	5	17	4	-	-	26

Summary (All races)

Male	12	40	30	4	5	91
Female	10	35	9	7	6	67
Total	22	75	39	11	11	158

Encephalitis

City notifications numbered 25 as follows: Europeans 22, Asiatics 2 and Bantu 1. Four of the European patients suffered from encephalitis as a complication of mumps; of these one was an adult female who apparently contracted this infection from her son but did not suffer from the usual manifestation of mumps. In contrast to previous years no cases of measles encephalitis were notified. In 21 cases the aetiology remained undetermined. It is clear that the position regarding

this group is unsatisfactory and that in future more intensive virus studies should be undertaken in cases falling into this category.

Scarlet Fever

One hundred and seventy-two cases were notified - all Europeans. This figure is a little over double the number reported during 1955.

Following consultations with the School Medical authorities, the period of exclusion of patients from school was reduced during September from six weeks to four weeks.

Cerebro-spinal Meningitis

Thirty-two cases were notified comprised as follows: Europeans 4, Coloureds 3, Bantu 22, and Asiatics 3. Two of the European cases were twins aged 5 weeks whose history indicated that they had not left their home except on one occasion to visit a hospital out-patient department. The other two European patients were young male adults. Nine of the Bantu patients resided at Cato Manor and two at Chesterville. Of these elven cases six were under the age of ten years.

The number of cases notified last year and during the year 1953/54 were 23 and 14 respectively. The number of cases notified during the last three years would therefore indicate that cerebro-spinal meningitis is not a serious health problem in the City. As indicated in the 1955 Annual Report this is indeed fortunate when the overcrowded conditions under which a large proportion of the non-Europeans live is taken into consideration. With these conditions in mind careful vigilance is always required when this infection is notified.

Leprosy

Twelve cases - ten Bantu and two Asiatics - were notified as against six last year and seventeen during the year 1953/54.

Tractoma

Three Bantu cases were notified, two of whom were Basuto who had contracted the disease in their own territory. The local case - a Zulu male aged 10 years - had evidently resided in the Wentworth area all his life.

Aseptic Meningitis

Dr. W.E.B.Edge, Paediatric Registrar of the Children's Hospital (Addington Hospital), has kindly furnished the following notes in respect of cases admitted to that institution during 1956. Dr. Edge's co-operation is hereby gratefully acknowledged.

"Monthly Incidence

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2	5	1	2	2	-	-	1	1	-	4	2

Age Distribution:

3 months to 12 years (Age limit for Children's Hospital 13 years)

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Symptomatology:

Headache, often accompanied by neck pain; in older children. Complained of in nearly all cases. Vomiting in nearly all cases. Pyrexia, normally moderate - 100-103°; rarely up to 105°. Irritability or drowsiness common and useful signs in infants. Convulsions remarkably absent - seen in one doubtful case only.

Signs:

Neck and back stiffness usual, but by no means invariable.
Full fontanelle in infants but by no means invariable.

C.S.F. Findings:

Cells - 0 to 700/cmm, usually with predominance of lymphocytes, but ploymorphs may predominate, especially with the lower counts. Almost invariably a lymphocyte swing takes place later. Protein - normal or slightly raised - up to 70 mgm%. Remainder of chemistry normal.

Course of Disease:

There is usually a dramatic symptomatic response to lumbar puncture. Symptoms seldom last more than one week in all. The temperature usually subsides in a few days, but may persist for as long as ten days. Abnormal C.S.F. may persist for two weeks or more. There have been no sequelae.

Virus Studies:

These are very incomplete. They have been undertaken in most cases but results are not all to hand. In only four cases were positive results obtained. In two sisters Coxsackie B. virus was found in the C.S.F. In two patients ECHO viruses (as yet unidentified) were isolated from the stools."

So much for the clinical picture. As regards the aetiology of this disorder, intensive investigations carried out by the Department in the environment of these cases failed to disclose any common factor.

Infectious Hepatitis

During August, the Factory Medical Officer of a large Company manufacturing toilet preparations and various edible products, requested the assistance of this Department, as 9 European members of the staff were off duty by reason of infectious hepatitis. Over a period of two weeks, the number affected rose to 21. The patients were employed in widely different portions of the factory, and it was found that the only common factor in all cases was food partaken in the Company's canteen.

Early investigations disclosed that one of the European canteen workers, whose main duty was the preparation of raw salads, had suffered from infectious hepatitis in January, 1956. The actual canteen comprised two kitchens, which cooked and prepared meals for five separate dining rooms, all housed in the same building. It was also disclosed that should one dining room run short of raw salads it would borrow from an adjoining dining room.

In view of the fact that a patient may remain a carrier for as long as 18 months after recovery, the canteen worker concerned was immediately removed to a non-food handling form of employment.

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Other precautionary measures carried out were as follows:

1. All utensils, cutlery, crockery etc. was boiled for 10 minutes after use for the following two weeks;
2. A chlorinated detergent was used in the wash-up water thereafter;
3. All table-tops, shelves, floors etc. were swabbed with a weak solution of formalin. This to be done daily for several days;
4. Fumigation of the canteen premises by formalin spray;
5. The temperatures of canteen staff and edible products workers were taken daily for two weeks;
6. All staff were encouraged to wash hands before meals and after visits to toilets, etc.;
7. Prophylactic gamma-globulin has been proved to have a good protective value in the U.S.A., in doses of .06 to .15 c.c. per 1 lb. body weight. The administration of this prophylactic was left to the discretion of the factory Medical Officer and factory management, and, on the suggestion of the Department, all the canteen staff and those workers who came into contact with any raw ingredient of the marketed products were protected. Stools from the canteen workers concerned were examined, but no virus was found.

In view of the incubation period extending from 21 to 35 days it was felt that the outbreak was due to some form of contamination in the canteen round about the beginning of July.

The position was closely watched for the next six weeks and no fresh case was reported, except for one isolated case reported in November. There appeared to be no connection between this isolated case and the main outbreak.

Influenza

At the beginning of March, the attention of the Department was drawn to an outbreak of an influenza-like illness amongst the employees of a factory in the Maydon Wharf area. Apart from a small number of Europeans, the staff consisted of about 800 Asiatic and Bantu employees. By the middle of the month 125 employees had sickened.

Material for virus studies was submitted but no results were forthcoming. The outbreak was of interest on account of its isolated nature. One factor which undoubtedly favoured the spread of the infection was the crowded conditions under which the employees worked.

III OTHER COMMUNICABLE OR PREVENTIBLE DISEASES

Amoebiasis

Dr. R. Elsdon-Dew, the Director of the Amoebiasis Research Unit, Durban, has kindly submitted the following brief report on the work of the Unit for inclusion in this Annual Report. The researches carried out by the Unit are of inestimable value to the City and the Director's active co-operation with this Department is hereby acknowledged with much appreciation.

"The Amoebiasis Research Unit has continued with it's work. This disease is one of the major problems of Durban, as the local African is peculiarly susceptible to a virulent form of the disease, which at the commencement of the Unit's activities had a mortality rate of 12 per cent. Though the mortality rate is now only two per cent, methods are still being sought to further reduce this. Durban has

always been notorious for this disease, and this notoriety - not altogether justified - does the tourist traffic considerable harm.

Though the White and Indian populations do not suffer from the severe form of the disease, there is a large amount of invalidism resulting from the parasite - an invalidism accentuated by the amoebophobia so common in the City.

The main problems lie in a better appreciation of the condition, and an understanding of the various factors involved in the genesis of the disease - all problems singularly difficult of solution. Examples of questions to be answered are:- Why is the disease so prevalent in Durban, when in Lourenco Marques on the same coast and even more tropical, the disease is much less common? Why does the African get the disease in an acute fulminant form, and the White as a chronic ill-defined syndrome?

These and many other questions still face the Unit and it is with appreciation that we hear that the United States Public Health Service has made a grant-in-aid to the Unit.

The Unit has a world wide reputation as is evidenced by numerous invitations to overseas conferences, and by the numerous famous visitors to the Unit, many of whom stay for extended periods. One of such visits culminated in the grant.

The Unit now hopes to go ahead on a much larger scale. Up to now it has been working on a small budget which constricted activity and retarded progress. A new building is projected to house the additional staff and apparatus made possible by the grant.

Not only is work being done on the amoeba, but other parasites, such as bilharzia and the intestinal worms, are also being studied.

All those interested in the health and welfare of our peoples will wish this Research Unit every success, and will applaud the Council for Scientific and Industrial Research for its initiative in sponsoring the work."

Because of its interest, the following paragraph to Dr. Elsdon-Dew's report is added at this stage.

"Even such 'lowly' parasites as the round worm constitute a heavy economic load, if they do not cause disease. When it is realised that the round worm female lays some 200,000 eggs per day, it is easily understood why the worms are so 'common' and some idea can be gained of the food stolen from their hosts."

Bilharzia

Towards the end of 1955, the Chief Regional Health Officer/ Natal took steps to establish an Ad Hoc Bilharzia Committee in order to explore the problem of bilharziasis in Natal. Various interested bodies, including the City Health Department, were represented on the Committee.

The Committee first met in January, 1956 and, at its first meeting, several aspects of the disease were discussed at length. It was then suggested that investigations should be carried out dealing with such subjects as the ecology of snails and their eradication, that the subject of health education should be explored, that a survey of infestation should be carried out and that therapeutic trials should be undertaken.

Five meetings of the Committee were held during the year leading to a most valuable exchange of information and views.

One project sponsored by the Committee was a survey of urinary bilharziasis in a Bantu school at Chesterville. The laboratory work for the survey was kindly performed by the Amoebiasis Research Unit.

The results indicated that, even in a city like Durban, there was a high rate of infestation with S.haemotobium in Bantu children. For instance, out of 271 male children examined, 145 gave a positive result i.e. 54%. In the junior classes the percentage amongst males was 62%. Amongst female children the percentage was much less, as out of 300 children examined, 52 gave positive findings, i.e. 17%.

On behalf of the Committee, the Amoebiasis Research Unit undertook a survey of the autopsy records of King Edward VIII Hospital from which it was ascertained that out of 1,500 autopsies in persons five years and over in only eight could bilharzia be regarded as the primary cause of death, and only in another eight as a contributory cause of death.

Several members of the Committee advanced the opinion that, despite the high incidence of the parasite in the Bantu, the morbidity due to the disease was negligible in comparison with other diseases affecting the area. Doubts were even expressed as to whether under local conditions, with the possibility of re-infection, treatment should be carried out owing to the possibility of doing more harm than good. This is an important point and certainly merits further investigation.

In August, the Bilharziasis and Tropical Diseases Sub-Committee of the Council for Scientific and Industrial Research extended an invitation to members of the Ad Hoc Committee to attend the annual meeting of the Steering Committee of the Bilharzia Unit, in the Transvaal in November. The Deputy City Medical Officer of Health attended this meeting and subsequently submitted a report on his tour of duty.

Other developments during the year included:

(1) The production and completion, with sound, by the Health Education Section of a film on the subject of bilharzia. This film is discussed later on in this Report;
(2) The acceptance by the City Council of the principle that one or more swimming baths should be established at Kwa Mashu;
(3) The acceptance by the Provincial Administration of the responsibility for the treatment of patients suffering from bilharzia.

Food-Poisoning

During the course of the year the Department investigated five outbreaks of food poisoning. Epitomised these were:

(1) Somtseu Road Location: 21 persons involved: Suspected food - cooked poultry;
(2) Hotel outbreak: 46 persons involved: Suspected food - crayfish cocktail;
(3) Independent Restaurant and Hotel outbreaks: 10 persons involved: Suspected food - fresh oysters;
(4) Private Hotel outbreak: 8 persons involved: Suspected food - a dessert (Swiss Bavarois);
(5) Race meeting outbreak: 5 persons involved: Suspected food - sausages.

(1) Somtseu Road Location: During the latter part of February, the Department was notified that 21 Bantu adults, who resided at the above Location, had been admitted to the King Edward VIII Hospital suffering from food poisoning. Their histories disclosed that they had all eaten cooked poultry on the previous evening and had sickened shortly afterwards. The poultry had been purchased from a Bantu hawker in the Location. This person was traced and he stated that he was a labourer employed in the Dock Area, and had worked on a particular ship. He maintained that a certain number of fowl carcases had been given to him by a member of the crew and that he had stored them on the wharf until the evening and then conveyed them to Somtseu Road Location, where they were cut up and sold.

Investigations at the ship disclosed that 100 fowls had been boiled and served for supper. No food poisoning had occurred aboard the ship. The carcases of these fowls were deposited in a large refuse container, situated on the wharf, adjoining the ship in question. This particular refuse container was used for the disposal of all refuse from the ship and such refuse could possibly have included noxious material.

At the time of the visit to the ship it was noticed that numbers of non-Europeans were scavenging food scraps from the container. The probability is therefore that the fowl carcases were recovered from the refuse container, where they had been contaminated, and then sold.

(2) Hotel Outbreak: During July a dinner party attended by 42 persons was held in the hotel. During the early hours of the following morning 39 of the diners suffered from food poisoning. The common food factor was crayfish cocktail. Further investigations disclosed that several smaller parties had been held the same evening at the hotel. The members of these parties were traced in consequence of which it was discovered that 7 were also suffering from food poisoning. They also had partaken of crayfish cocktail. Thirty-one other persons who did not eat the crayfish cocktail suffered no ill effects.

There was a slight time-lag in the Department being notified of the outbreak, nevertheless all the ingredients used in the preparation of the crayfish cocktail, together with any other likely foods, such as liquid egg and also crayfish caught at the same source were submitted for bacteriological examination. All results were negative.

On examination of the Bantu food handler, who prepared the cocktail several hours before it was served, it was discovered that he had several old "cuts" on his fingers. Swabs taken from these yielded a growth of streptococcus viridans in the one case, and a growth of staphylococcus albus in the other case.

(3) Restuarant plus Hotel Outbreak: During August, two separate notifications were received, involving 10 persons who had sickened after eating fresh oysters. Investigation disclosed that the oysters in both cases had been obtained from the same source, i.e. an Indian fisherman. The fisherman was traced and he disclosed that the oysters had been caught in the vicinity of Umkomaas. To transport his catches to Durban he used large wicker baskets and, in order to keep the oysters alive pending delivery, he immersed the baskets in the waters of the Bayhead.

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After delivery to the restaurant, it was customary to store the oysters in drums of sea water, the latter being collected at the mouth of a river. In the case of the hotel, a saline solution made up with cooking salt was used to keep the oysters alive.

Samples of water from the river mouth and from the Bay Head were submitted for bacteriological examination. As expected, in both cases high counts of B. coli were found in the samples. Examination of freshly caught oysters gave negative results.

(4) Private Hotel Outbreak: During October, the Department was notified that 8 persons had suffered from gastro-enteritis after an evening meal. The only common food factor was a dessert known as Swiss Bavarois, which had also been consumed by the bulk of the other residents without ill-effects. A large enamel tray was used for the setting of the dessert This tray was used for sundry kitchen purposes, and was stored in an exposed position when not in use.

Laboratory examinations of stool specimens from the patients revealed the presence of S. typhimurium in all specimens.

Repeated attempts were made to recover rodents from the kitchen area without success. One black rat caught in the roof gave a negative result. On one occasion mice droppings were found in the vicinity of the refrigerator.

(5) Race Meeting Outbreak: Following attendance at a race meeting early in August, five persons were treated at the Addington Hospital for food poisoning. All the persons concerned were interviewed, and it was established that they had all eaten cooked sausages which had been purchased from one particular snack bar at the course.

All the sausages had been pre-cooked at the main kitchen, and it was ascertained that 5,370 sausages had been cooked for that particular race meeting, of which 1,000 were issued and sold at the snack bar in question.

The cause of this small outbreak was not traced though there was a suspicion that some of the sausages may have been contaminated with staphylococcus organisms prior to being packed in the warming oven for storage purposes.

Suspected Food Poisoning

Early in the year, the Department was notified of suspected food poisoning in a family involving three European children and their mother. Two of the children were admitted to hospital, and on the same day, one child died.

The history was to the effect that the family bought some meat pies and pasties which were eaten for lunch. During the afternoon two of the children complained of abdominal pains and diarrhoea which increased in intensity and warranted their admission to hospital early the following morning. The third child and the mother had similar symptoms but to a very much lesser degree.

Steps were immediately taken to suspend all activities in the bakery that had made the meat pies and the pasties. The medical history of the bakery staff, and the premises were closely investigated, without disclosing any likely cause of food poisoning.

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Bacteriological examination of the stools of the children admitted to hospital revealed the presence of a dysentery organism of the Flexner type. It was therefore concluded that conditions at the bakery had no connection with the occurrence.

Methyl Alcohol Poisoning

At the beginning of May at least 9 Bantu died from methyl alcohol poisoning and 50 or more were treated at King Edward VIII Hospital for the same condition.

It appeared that a railway tank car at the Oil Sites at Island View was found to contain a certain amount of liquid. The tank car was washed out before use, and about 22 gallons of the liquid were recovered. The labourers engaged in this operation soon found that the liquid had an alcohol base and it occurred to some of them that it might serve as a suitable form of refreshment. Accordingly, an unknown quantity was drained off and stored in small containers which were either removed at the time, or hidden until lunch time. During the lunch break, the liquid was produced, and in some cases diluted with different types of cold drinks with very disastrous results. Some of this liquid was suspected to have found its way to Cato Manor and elsewhere and the Department sent out its loudspeaker vans throughout Durban to warn the Bantu population against the drinking of any concoction which might contain the "Oil Site Juice". There is no doubt that many a celebration was summarily cancelled and further casualties averted by this means. The Department also sought the assistance of the South African Broadcasting Corporation to broadcast a warning to employers during the Regional News Service and the co-operation of the South African Corporation on that occasion is hereby gratefully acknowledged.

The investigations by the Criminal Investigation Department have been completed and an inquest is now pending.

IV. TUBERCULOSIS

Vital Statistics

The number of known cases or pulmonary tuberculosis including quiescent cases is set out hereunder:

European	1,251
Coloured	824
Asiatic	2,534
Bantu	6,393
Total	10,002

These figures probably reflect the position in Durban reasonably well, although the number of Bantu cases must be accepted with considerable reserve. This is particularly so as this section of the population is always on the move, not only in and out of Durban, but the members also change their local addresses so frequently that it has become an impossible task to follow them all up from time to time to establish the state of their disease.

Insofar as adult male Bantu cases are concerned, considerable assistance is afforded by the Municipal Native Administration Department.

The Native Administration Department is regularly advised by this Department of the names of notified adult Bantu tuberculosis patients and an indication is given to that Department of their fitness for work. Again, this Department is also advised on request of the addresses

of any cases which it cannot locate. The Native Administration Department in turn, when such patients present themselves for registration for employment, advises this Department of their addresses and, if no recent report on their fitness is available, refers them to this Department for assessment.

In the case of females and children, naturally, no such liaison can be maintained and the position is rendered so much more difficult.

Notifications

Statistics of City Cases

(a) Pulmonary Tuberculosis

Year	E.	C.	A.	B.	Total
1956	144	119	497	1,963	2,723
1955	154	101	242	1,341	1,838
Average 1946-1955	165	115	419	1,089	1,788

(b) Non-Pulmonary Tuberculosis

Year	E.	C.	A.	B.	Total
1956	8	10	77	137	232
1955	12	13	66	189	280
Average 1946-1955	7	10	45	111	173

Commentary

From the above table it will be seen (1) that during 1956, there was a considerable increase in the number of cases of pulmonary tuberculosis notified and (2) that the Bantu cases accounted for the major proportion, the increase over the previous year being 622.

The steady increase in the number of Bantu cases notified over the last ten years can be accounted for, to some extent, by the increasing facilities for diagnosis, although amongst the other races the deviation from the 10 year average figure is by no means nearly so great.

The 1956 figures for non-pulmonary tuberculosis, whilst showing a decrease from 1955, reflect the general trend, as the 1955 figures in total were particularly high.

Attack Rate

It is difficult to escape the impression from the notifications that pulmonary tuberculosis is increasing amongst the Bantu, but even making due allowance for increased and improved diagnostic facilities, it is felt that a clearer indication may be given by a consideration of the attack rate.

The attack rate represents the number of notifications per 1,000 head of the population and thus allowance for an increase of population can be made. The figures in racial groups are as follows:

	1951	1955	1956
European	1.39	1.03	0.94
Coloured	8.06	5.40	6.18
Asiatic	3.56	1.46	2.90
Bantu	7.84	7.81	11.16

N.B. The population figures for 1951 are those of the census and for 1955 and 1956 are those estimated departmentally.

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From these figures it will be seen that the European rate shows a steady decline, the Coloured and Asiatic a decline from 1951, whilst the Bantu rate shows a definite increase, in fact to 11.16 per 1,000 (or over 1%).

In Cato Manor, of 3,131 X-Rays taken of suspect cases during the year, 6.4% were found to be positive, whilst of 692 contacts, 4.7% were found to be positive.

Taking into account the facts revealed in the last two paragraphs a conservative assessment of the attack rate would therefore appear to be between 2-3% in the Bantu. Obviously this state of affairs can leave no room for complacency.

Practically all the notifications received are made by the Durban Chest Clinic and the various hospitals, very few being sent by private practitioners. The chief difficulties encountered in notifications arise from:

(a) The failure of responsible persons and authorities to notify new cases promptly;
(b) Inadequate information being completed on the notification form. In many instances, especially amongst the Bantu, the address given by the informant is incorrect; consequently the Health Assistants spend a great deal of time in fruitless searches.

Deaths: City Cases		E.	C.	B.	A.	Total
Pulmonary	1956	28	14	273	30	345
	1955	8	6	270	28	312
Non-Pulmonary	1956	3	3	107	15	128
	1955	4	2	89	24	119

Death Rate

		E.	C.	B.	A.	All Races
Pulmonary	1956	0.18	0.72	1.55	0.17	0.66
	1955	0.06	0.33	1.69	0.17	0.65

Comments

Deaths amongst City cases in 1956 showed in increase in both pulmonary and non-pulmonary tuberculosis.

The death rate for all races remains for all practical purposes, unchanged although it has risen in the European and Coloured communities. The decreased death rate in the Bantu is of probably little significance as the proportion of imported cases residing in Durban and, in fact, the exact population figure of the Bantu, remain unknown.

Hospital Facilities

Set out below are the hospitals and settlements admitting cases from Durban with their bed capacities for the different racial groups.

Hospital/Settlement	Authority	E.	C.	B.	A.	Mixed	Total
King George V	Union Govt.	144	47	767	66	271	1,295
Point	Provincial	-	-	150	-	-	150
Umlazi	Mission	-	-	60	-	-	60
McCord Zulu	Private	-	-	-	-	103	103
F.O.S.A.	S.A.N.T.A.	-	-	29	91	-	120
Toc H.	S.A.N.T.A.	-	-	136	-	-	136
Lillieshall	S.A.N.T.A.	26	-	-	-	-	26
	Total	170	47	1,142	157	374	1,890

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In addition a number of tuberculosis cases are always to be found in general hospitals such as Addington, King Edward VIII and S.A.R hospitals, although no set number of beds are allocated for this purpose.

In addition, a number of Mission Hospitals scattered throughout Natal accommodate tuberculosis cases as and when the necessity arises.

Insofar as King George V Hospital is concerned, the mixed beds reflect the mixed non-European surgical and children's beds. It is of note that in this institution the number of beds available for Asiatics has decreased from 220 to 66 as a result of the F.O.S.A. Settlement taking more cases.

(1) Settlements:

With the introduction of universal out-patient treatment the need for many more settlements becomes apparent. Physically many patients are fit for limited work, but are still capable of transmitting the disease. In all races except the Bantu, the problem can be faced as the greater proportion of the patients can quickly be taught principles of personal hygiene and relied upon to carry out treatment. The Bantu, by virtue of his home environment, frequently cannot carry out health requirements; moreover, he cannot appreciate the necessity for these measures, and fails to attend regularly for treatment and surveillance.

The treatment of all communicable Bantu cases for at least three months in settlements, whilst sounding Utopian, is most necessary and desirable. This stay in a settlement would achieve the following:

(i) Remove them from the population at risk as a source of infection;
(ii) Render the majority non-infectious;
(iii) Assist materially in their cure by reason of the rest and good food provided;
(iv) Inculcate treatment routines they must observe on discharge even if they return to work;
(v) Assist rehabilitation.

(2) Fitness for Work

It happens not infrequently that patients are discharged from hospitals with positive sputa. The reason for this is assumed to be that:

(a) The patient will no longer remain in hospital;
(b) Physically he is sufficiently fit not to warrant further costly hospitalisation.

The danger to public health, however, cannot be minimised.

It must be obvious that a tuberculosis patient cannot resume full work during recovery from the disease. This, in turn, implies light work followed by medium and finally by full work. However, as the Bantu represent on the whole the unskilled labourers, such a gradation is not possible. Light work for a labourer just does not exist. In fairness to employers in Durban it is gratifying to be able to record, in many cases, their most sympathetic and helpful attitude in doing their best to assist their employees who have or who are recovering from tuberculosis.

(3) Isolation

The extent to which isolation is implemented in General Hospitals varies, but in many cases it is inadequate. Often open cases of

tuberculosis are nursed in general wards and common utensils and facilities are used.

(4) Case Follow-up

Many cases are discharged from hospitals with the advice that they attend the Durban Chest Clinic. Often no definite direction or letter is given to the patient with the result that frequently treatment stops on discharge.

Notification of discharges from hospital often reach this Department so long after the fact that the patient, if a Bantu, can never be traced.

(5) Imported Cases

The Hospitals and Durban Chest Clinic serve as magnets, drawing never-ending streams of Bantu patients from even beyond the boundaries of Natal, to seek treatment by those whose reputations have reached them.

After hospital treatment many live in the City but only some attend the Chest Clinic for continuation of treatment. The remainder continue to spread the disease and move from one abode to another. Thus the advantage of an efficient hospital within the City is seriously undermined.

(6) King George V Hospital

The following report regarding the activities at this hospital have kindly been furnished by the Medical Superintendent:

"The policy guiding the admission of Tuberculosis sufferers to this hospital has remained essentially the same as outlined in my previous report, i.e. stress is laid upon admitting primarily the infectious, toxic patients and submitting them to intensive antibiotic treatment in order to render them non-infectious and reasonably fit within the earliest possible time. In this way the maximum possible turn-over of patients is achieved with a good prospect of non-relapse, provided the patients submit themselves to further prolonged ambulant treatment and supervision. While the patient is in hospital, all efforts are made to educate him with that aim in view. Regular out-patient treatment and follow-up is made possible by the vast network of treatment centres in Durban, Natal and Zululand.

If indicated, residual chronic infectious patients are dispersed to the various tuberculosis settlements, unless surgical treatment is possible to render them non-infectious.

Our present therapy is directed towards the quickest possible resolution of the tuberculous lesion, which as a rule responds dramatically in the acute untreated case. The mainstay of treatment is still prolonged Streptomycin and Isoniazid in a reasonably high dosage.

Other combinations such as Dipasic with prolonged Streptomycin and more recent anti-tuberculous agents are being utilised in order to cut down on the period of resolution or stabilisation of the disease process, or to overcome drug resistance in cases which were previously inadequately treated. A very small percentage of cases who, due to a low host response, do not respond to treatment as satisfactorily as expected, present a problem which has to be further investigated.

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The average duration of stay in hospital is still estimated at 6 months for the non-European patient, and 3-6 months for the European patient. This latter figure does not include a fairly large number of European patients, who are of the chronic infectious type usually with marked reduction of their respiratory reserve. Their duration of stay in hospital is naturally indefinite unless they can be dispersed to a suitable institution such as the Rosetta Convalescent Home.

There is no waiting list for European Tuberculosis sufferers and every effort is being made to admit all acutely ill non-European Tuberculosis patients, for whom beds are always made available, unless they are hospitalised elsewhere to our satisfaction. There exists no waiting list for acutely ill cases.

The only waiting list kept is the one for surgical cases as our thoracic surgical unit is working at full pressure in coping with the demand of the hospital and with cases referred from Natal, the Eastern Cape, Transkei and the Free State.

In conclusion I would like to mention that 250 additional non-European beds are in the process of being built and a further additional 100 non-European beds are being planned subject to Authority."

(7) Cases Hospitalised

The table below indicates the City cases admitted and discharged during the year from all hospitals:

Race	Admissions	Discharges	Left against advice
European	131 (179)	108 (179)	4 (2)
Coloured	68 (120)	41 (87)	6 (4)
Bantu	1,238(1,234)	1,050 (1,287)	97 (91)
Asiatic	328 (333)	258 (413)	17 (8)
All Races	1,765(1,866)	1,457 (1,966)	124 (105)

N.B. The figures in parenthesis indicate the 1955 figures.

Out-patient clinic Services

(1) Durban Chest Clinic

This large and modern clinic is proving, through no fault of its own, a mixed blessing to the City as its fame has attracted vast numbers of "foreign" Bantu to the town. These unfortunate persons come to seek treatment from far and near.

Large numbers of patients are now being treated on an out-patient basis without ever being admitted to hospital. A close liaison is, of necessity, being maintained between this Department, which carries out the field work, and the Chest Clinic which provides the diagnostic and treatment facilities.

The help and co-operation received from the staff of the Clinic by this Department is greatly appreciated.

The following report on the activities of the Chest Clinic during the year has been submitted:

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"The Management of the out-patient treatment of pulmonary tuberculosis has continued in much the same manner as during 1955.

Patients treated at home or at work show in nearly all cases steady clinical improvement with excellent (often dramatic) radiological clearing. Although these results are most encouraging to both patients and staff, there is however a small nucleus of patients (both European and non-European) who attend infrequently and whose response to treatment is poor. Fortunately the numbers of this "hardcore" of out-patients are small but nevertheless they provide the one unsatisfactory aspect to the otherwise most favourable position. Over the past years an axiom has now arisen at this clinic and that is, "if you attend regularly you must do well."

ATTENDANCE RETURNS

It will be noted from the following figures that there has been a steady increase in the attendances during the past 3 years. Most of the large business concerns in Durban now insist on a pre-employment X-Ray, and this coupled with the fact that the clinic is now well established and known throughout the town no doubt accounts for the overall expansion.

TABLE I: X-RAYS TAKEN

Year	70 m.m.	12" x 15"	Total
1954	43,425	23,419	66,844
1955	41,234	30,847	72,081
1956	48,810	33,599	82,409

TABLE II: PEOPLE ATTENDING FOR X-RAY

	City			Ex-City		
	70 m.m.	12" x 15"	Total	70 m.m.	12" x 15"	Total
Europeans	8,889	4,126	13,015	2,717	843	3,560
Coloureds	1,190	997	2,187	118	131	249
Asiatics	8,911	5,521	14,432	2,541	1,984	4,425
Bantu	13,737	10,654	24,391	4,626	5,546	10,172
		Total	54,025		Total	18,406

Grand Total: 72,431

Patients Attending for Treatment

It was estimated that 6,589 patients received treatment at the clinic during the year.

These figures are "broken down" and reflected in Table III.

TABLE III

No. of patients treated during 1956 at the Clinic	6,589
Europeans on INH alone	336
Europeans still having Streptomycin	85
Europeans who had Streptomycin now stopped (still on INH)	122
Non-Europeans on INH alone	5,263
Non-Europeans attending for Streptomycin	570
Non-Europeans who have attended for Streptomycin during 1956 and now discontinued	213
Total	6,589

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Contacts

A Contact Clinic was held twice weekly for the different race groups. During the last few months of the year a Native contact clinic was started. This particular clinic proved most unsatisfactory in previous years as contacts were difficult to trace. A Health Assistant from the City Health Department has now been working here daily and it is hoped that this clinic will show better results during the coming year.

As in previous years the same routine for checking contacts has been instituted, viz. a 70 m.m. X-Ray and Mantoux test (10 T.U.) and the giving of INH prophylactically to all close contacts.

Freeze-dried BCG vaccine is now on order and it is hoped to offer all contacts this vaccine in the very near future.

Contact clinic attendances are shown in Table IV:

TABLE IV: CONTACT CLINIC ATTENDANCES

	City	Ex-City	Total
Europeans	2,165	360	2,525
Asiatics	2,124	104	2,228

We would like to express our thanks to the staff of the City Health Department for their co-operation during the year."

(2) Cato Manor Clinic

This Mobile Clinic has proved of inestimable value and the urgent necessity for its being converted into a permanent clinic will become apparent on reading the report set out below and submitted by the Medical Officer in Charge:

"The commencement of the year found this clinic to be functioning with a mobile X-Ray unit and a mobile clinic on one morning (Friday) a week for X-Ray taking, and two afternoons a week for streptomycin injections. This service had been commenced in October, 1955, and was sited at the main bus rank in Cato Manor.

The service was extended from May, 1956, to the following schedule and the site changed to the present one adjacent to the Emergency Camp office of the Native Administration Department in Booth Road.

Monday:	Streptomycin injections, Mantoux readings.
Wednesday:	X-Ray and clinical work.
Thursday:	X-Ray and clinical work, streptomycin injections and Mantoux testing.
Friday:	X-Ray and clinical work, Mantoux testing.

The above schedule is partly determined by the availability of the X-Ray unit of the mass X-Ray section.

The response has been good and a general tuberculosis diagnostic and treatment service has been offered to patients who have come unreferred, or referred by hospitals for post-discharge follow-up by industrial firms, by welfare organisations and by general practitioners.

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All records are carried and the added factor of interruption of work occurring through rain and mechanical breakdown of either vehicle prompted the finding of a suitable building in order to become static. Limited and decreasing storage space tended to hamper work after a few months.

A suitable building of two disused Indian shops at 231 Main Road and owned by the Native Administration Department of the Corporation was considered suitable for conversion to a chest clinic with reasonably few alterations. Since November, 1955, negotiations have been in progress with this Department, the City Health Department and the Central Government with this end in view. Agreement in principle appears to have been reached but financial aspects are still receiving consideration.

The following figures give an indication of the extent of work and include prophylactic izoniazid treatment given to contacts at risk and cases with lesions of a doubtful nature but potentially tubercle. It will be noticed that one-third of the work concerned the contacts of notified cases. A close liaison is maintained with the City Health Department in this aspect of work. The Native Health Assistants of that Department assist with clerking at the vans and help to maintain contact group records which are kept separately filed. A meeting is held weekly with these Native Health Assistants, who operate in the Cato Manor area, to discuss contact matters.

1st January to 31st December, 1956	Suspect Cases	Contacts
Total No. of X-Ray plates	3,652	958
New X-Ray plates	3,131	692
Notified cases	201	33
% Notified cases from new X-Rays	6.4	4.7
Re-check X-Rays of cases on treatment	521	266
Mantoux tests	1,342	689
Cases put on INH prophylactic treatment	301	369
Total No. of streptomycin injections	10,092	

The higher yield of notified cases from suspect than contact group may attract notice as contrary to expectation. The suspect group is not a sample of a normal population but is a group of people who came for X-Ray because they felt ill in the majority of instances. The contact group on the other hand were sent for X-Ray by the Health Assistants as a routine.

The size of X-Ray used for screening and routine diagnostic purposes was the 70 millimetre film. This was found adequate for re-check purposes as well. The large film was used occasionally as an aid to diagnosis initially particularly for lateral views."

(3) Health Centres

(a) Springfield Health Centre

Much good work continues to be done on an intensive level in the Springfield Housing Estate and the report below, submitted by the Medical Superintendent, bears this out:

"The Springfield Housing Estate is a Durban Corporation sub-economic housing scheme with a population of about 5,500 Indians living in 650 homes.

A tuberculin and mass X-Ray survey commenced on 30th November, 1955. When the first phase of the survey concluded on 30th November, 1956, all but 23 persons had been tuberculin tested, and all but 21

had been X-Rayed (excluding some tuberculin negative children under 5 years). Thus a coverage of 99.6% of the population was obtained. The second phase of the survey commenced in July, 1956, and when it concluded on 30th November, 1956, all but 31 persons had been tuberculin tested and X-Rayed. A total of 5,154 persons were examined in both surveys.

Treatment: All cases of tuberculosis receive INH 15 mgm/Kg/Day at home or at work whenever possible.

Prophylaxis: (i) Contacts: All family contacts of active cases receive INH 5 mgm/Kg/Day for as long as the case receives treatment.

(ii) Non-contacts: All positive reactors at the time of the first survey, all persons who converted from negative to positive reactors, and all persons found to be positive reactors on moving into the area receive INH 5 mgm/Kg/Day for 6 months if pulmonary calcification is found on X-Ray and for 3 months if there is no calcification.

Before the survey commenced there were 125 known cases of pulmonary tuberculosis (2.3%). Of these 52 were regarded as active:

Primary tuberculosis	12
Minimal pulmonary tuberculosis	14
Moderately advanced pulmonary tuberculosis	17
Advanced pulmonary tuberculosis	9

During the first phase of the survey, 84 new cases of pulmonary tuberculosis were detected (1.5%):

Primary tuberculosis	31
Pleural effusion	1
Minimal pulmonary tuberculosis	33
Moderately advanced pulmonary tuberculosis	12
Advanced pulmonary tuberculosis	8

At the time of the first survey there were thus 136 cases of active pulmonary tuberculosis, a prevalence of 2.5%

During the second phase of the survey, 13 new cases of pulmonary tuberculosis were detected. (In addition 2 persons already suffering from tuberculosis moved into the area):

Primary tuberculosis	5
Pleural effusion	1
Minimal pulmonary tuberculosis	6
Moderately advanced pulmonary tuberculosis	1

Eight of these new cases were in contacts, and 4 were in persons who converted from a negative to a positive tuberculin reaction.

Due to population movement, deaths, the detection of new cases, and the assessment of certain cases as no longer active, the prevalence of active tuberculosis in the area at the end of the second survey remained at 2.5%.

Six cases of non-pulmonary tuberculosis were known before the survey commenced, one case was found during the first phase, and three during the second phase."

Commentary

Particular attention is drawn to the high prevalence of the disease in this area and the fact that it has remained unchanged over the period of review.

(b) Institute of Family and Community Health

The Head of the Institute has furnished the following report on the activities of the Institute, which now falls under the aegis of the Natal Provincial Administration and not under the Central Government as in the past.

"The services provided by the Institute of Family and Community Health in respect of tuberculosis forms in integral part of our overall general medical care programme to the communities receiving this service.

The tuberculosis programme includes:

1. Case-finding Programme and follow-up of contacts;
2. Treatment of cases;
3. Community education;
4. Liaison with hospitals, clinics, Medical Officer of Health and voluntary organisations.

Case Finding Programme

The aim of the service is to ensure that all individuals who can be X-Rayed are investigated at regular intervals. Children are routinely tuberculin tested. Cases are referred to the Durban Chest Clinic for consultation and diagnosis and the majority of cases are routinely notified by the Durban Chest Clinic. The families of the cases are visited by our nurses and the contacts are referred for check-up. Once a month a Mass X-Ray van visits the Institute.

Treatment of Cases

A special T.B. Clinic as such is not conducted, but all patients requiring treatment are managed within the framework of our overall service. The largest percentage of cases are treated at the Institute and those who are too ill receive care at home.

Community Education

The aim of this aspect of our work is to ensure that the communities are made aware of the nature, mode of spread, treatment facilities and prevention of tuberculosis. The further object is to stimulate community effort, so that people will establish their own organisations to help promote their own health. Both the Merebank and Lamont communities have well-established community centres doing this very job.

Our health education methods involve discussions with individuals and groups, as well as the use of visual aids, e.g. specially designed posters and pamphlets, and also films.

Liaison with other Organisations

The Institute maintains a continuous liaison with other agencies in respect of case-finding, management of cases and their rehabilitation, and prevention."

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From statistics supplied with the above report it is of note that the Institute concerned itself with an estimated population of 18,006 made up of 6,804 Indians, 530 Coloureds and 237 Bantu at Merebank, and 10,435 Bantu at Lamont Location. Based on this population and according to the figures submitted by the Institute, the known cases showed prevalence and attack rates per 1,000 as set out below:

Prevalence Rate per 1,000 Population

		Primary Tuberculosis	Pulmonary Tuberculos
Merebank	Indian	5.1	4.4
Merebank	Coloured	1.9	7.5
Merebank	Bantu	12.7	37.9
Lamont Location	Bantu	5.6	12.6

The figures under primary tuberculosis include Mantoux positive cases with no radiological findings.

Attack Rate per 1,000 Population

		Pulmonary Tuberculosis (excluding primary cases)
Merebank	Indian	2.5
Merebank	Coloured	3.8
Merebank	Bantu	25.3
Lamont Location	Bantu	7.5

X-Rays: Total number at Merebank and Lamont Location X-Rayed under direction of the Institute - 1,798.

General

(a) The following figures indicate the numbers of known cases of pulmonary tuberculosis in non-permanent residents as at the 31st December, 1956:

Merebank	Indian	1
Merebank	Coloured	-
Merebank	Bantu	4
Lamont Location	Bantu	19

(b) Ten new cases of non-pulmonary tuberculosis were found in Lamont Location and Merebank.

Commentary

1. It will be noted that the attack rate amongst the Bantu at Merebank and Lamont Location is apparently lower than at Cato Manor;
2. The responsibility for the control of tuberculosis in Merebank and Lamont Location devolves upon the City Council and cases occurring in these areas are initially investigated by the Department's staff.

Domiciliary Treatment of Tuberculosis in Rural Areas

Earlier in this report reference has been made to the problem of imported cases. Late in 1956, the Union Government began to implement a scheme designed to cope with the problem throughout Natal.

The whole of Natal was divided into 46 areas and every place where domiciliary treatment could be obtained, marked on a map.

These treatment centres range from the Durban Chest Clinic, through Mission Hospitals to District Surgeons.

Theoretically, and it is hoped practically, all patients will be able to attend for treatment near their homes.

The principle is to refer "imported" patients from hospitals and clinics to clinics in their area of domicile and this is done by giving the patient a treatment card and advising him where to report. At the same time the treatment centre to which the patient has been directed is advised. This scheme has much to commend it and it is hoped that it will succeed.

From this City's point of view, the success is dependent on:

(a) The hospitals and chest clinics referring the imported cases to their place of domicile;
(b) The case actually going to his place of domicile. The forcible exportation of these cases cannot be contemplated, but unless they go and and attend for treatment, little will be achieved.

Staff and Activities

The staff of the City Health Department engaged on tuberculosis work, consists of five European Health Visitors, two European clerks and two European Lady Assistants, together with nine Bantu and five Indian Health Assistants.

The Bantu and Indian Health Assistants include in their duties all the follow-up field work in connection with venereal disease cases and contacts.

European Health Visitors: Each European Health Visitor is allocated a district for domiciliary work amongst Europeans and Coloureds. Where necessary, assistance is given in respect of Non-European cases.

In addition to routine follow-ups, the Health Visitors attend at sessions at the Durban Chest Clinic and assist with the treatment - including the giving of injections - at the homes of certain cases.

Included in the duties of the Health Visitors are:
(1) Investigations for applications for financial assistance and other aid;
(2) Attendance at the monthly meeting of the Care Committee of Natal Anti-Tuberculosis Association when recommendations for grants are submitted.

Non-European Health Assistants: The Non-European Health Assistants perform similar duties amongst the Asiatic and Bantu communities, although, naturally, they are unable to undertake any home treatment.

General

The table below sets out the number of visits made by the field staff during 1956, the previous year's figures being given in parenthesis:

European	5,367 (+ 219 visits to Bantu patients)	(6,520)
Coloured	1,271	(1,817)
Bantu	9,880	(8,380)
Asiatic	4,935	(5,477)
Total	21,453	(22,194)

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With the considerable increase in the amount of out-patient treatment now being instituted, it is imperative for the staff of this section to be increased. This applies particularly to the Bantu, as it is becoming apparent that re-visits to these patients are essential.

In any case, the considerable increase in notifications alone, points to the concomitant necessity for an increase in staff.

Health Education

The Health Education Section of this Department has carried out much work amongst large groups of non-Europeans. Details in this regard are given elsewhere in the report.

Financial Liability for Cases

No further progress has been made in this connection and no amendment of the Public Health Act can be anticipated in the near future.

Domiciliary Assistance

In addition to Government Disability and Maintenance Grants made to patients, financial assistance is given by the Care Committee of the Friends of the Sick Association (to Indian cases) and by the Care Committee of the Natal Anti-Tuberculosis Association. The Health Visitors are members of the latter Care Committee and having visited the majority of patients' homes are in a position to furnish material assistance to that body.

Set out below is a report of the Natal Anti-Tuberculosis Care Committee, kindly furnished by the Secretary of the Association.

"The Care Committee meets monthly to allocate grants. The aid given is in the following main directions:

(1) Assistance to families of all racial groups where the breadwinner has developed T.B. and is unable to carry on his or her occupation. Such items as rent and food for the family are provided;
(2) Milk for children suffering from primary T.B.;
(3) Financial aid and food for those receiving ambulatory/domiciliary treatment.

The following figures give the expenditure on assistance in recent years:

Year	Amount	Families Assisted
1949	£4,352	332
1950	4,939	371
1951	6,647	544
1952	7,649	560
1953	8,370	664
1954	10,362	923
1955	8,913	810
1956	7,274	869

Whilst an endeavour is made to lighten the effect of the breadwinner contracting tuberculosis, this can be done to a limited extent only in the case of the non-European. Invariably the rental of the shacks is 30/- or more per month, so that quite a large proportion of the assistance given goes in rent. In no case has it been necessary

to refuse help, and it is anticipated that during 1957 it will be possible to assist on a slightly higher scale.

It will be noted that the amount expended on Care during the year has been below the previous year, which was due to a reduction which had to be made earlier on in order to keep within safe limits of expenditure.

Our indebtedness to Sisters E.M.Hook, S.Dolkens, F.B. Longmore, R.J.Stead and J.Taylor of the City Health Department for their very valuable work in reporting on cases requiring assistance cannot adequately be measured. Their sympathetic attitude towards distress ensures that the best is done for those unfortunate enough to be affected by T.B.

In one way and another help is received from many sources. Special mention may be made of the following:

The Social Welfare Department, F.O.S.A., Child Welfare Society, Mayville Committee, Adams Mission and District Bantu Child Welfare Society, Indian Immigration Department, King George V Hospital, McCord's and the Local Health Commission. Native Commissioners are also helpful in handling grants and obtaining information in regard to Native families in Country Districts as also is the Polela Health Centre.

We are obliged to the Medical Officer-in-Charge of the Durban Chest Clinic for facilities for payment of grants at month ends.

The Association continued to act as agents for the King George V Silver Jubilee Fund for Tuberculosis which provides funds for assistance to T.B. sufferers and their families."

Conclusion

The foregoing reports of the activities undertaken in respect of tuberculosis reveals the great amount of work that is being done but at the same time points to the immense task lying ahead if control is to be maintained. The picture of the disease amongst the Europeans remains moderately bright, amongst the Indians fair only but amongst the Bantu depressing.

The widespread introduction of domiciliary treatment has much to commend it, but the administration of medicines to patients living in circumstances which contributed materially to the onset of their disease must be offset by the provision of more settlements, especially for the Bantu, and an expansion of the staff of the Department if control of the disease is not to be lost.

V. VENEREAL DISEASES

As in previous years the statistical information on venereal diseases is limited as returns are received from only the Addington Clinic (on Europeans and Coloureds) and the Congella and Cato Manor Clinics (on Coloureds, Bantu and Asiatics). Other institutions, prisons, district surgeons and private practitioners are known to treat large numbers of cases annually but do not furnish returns to the Medical Officer of Health. Consequently the figures published reflect a "minimal" state and not the true state of affairs.

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During the past year there has been an increase in the number of new cases in the non-European groups while European new cases have tended to decrease. The total new cases rate per 1,000 population has increased to 28.08 which is still less than the record of 28.43 recorded in 1947. However a new record has been established in the number of new cases attending the clinics which is 17.77% more than the 1949 figure. Comparison has been made of the 1955 and 1956 totals of new cases in the various racial groups and the following facts emerge:

(a) Europeans: An overall fall of 10.49% has been noted. Among City cases males fell by 14.15%, females increased by 100%, with a total fall of 11.98%;

(b) Coloureds: There has again been in increase among City cases of 89.32% (males increased by 121.18% and females by 28.79%) but imported cases hav fallen by 31.03% (males being 37.50% less than the females)the same as last year;

Note: Of the 234 European and Coloured imported male cases 191 were seamen the majority of whom attended between October and December i.e. after the closing of the Suez Canal. (Cf 246 seamen in 261 cases in 1955).

(c) Bantu: It was found that City cases had increased by 16.89% (males by 16.22% and females by 17.79%) while the estimated population had only increased by 5.01%. Imported cases increased 21.85% (males by 6.25% and females by 38.52% - wives visiting husbands employed in town accounted for a large number of these cases); and

(d) Asiatics: With an estimated population increase of 3.30%, City cases increased by 62.60% (males by 33.60% and females by 49.61%. Of these females 15.84% had been referred from Municipal Ante-Natal Clinics as a result of the seriological investigations started this year). Imported cases also increased by 57.55% (males by 54.9% and females by 66.67%) the gross increase of Asiatic cases being 62.02%. From 1950 when the City rate of new cases (Asiatics) was 7.17 per 1,000 there had been a steady fall until 1954, when it was 1.43 with a slight rise to 2.46 in 1955. In 1956 the rate was 4.82.

The corresponding increase in the numbers of new cases among the City and imported groups, males and females, is of public health importance and, sociologically, the increase of female cases appears significant in that it reveals that the rigid social structure of the Asiatic population is beginning to break down. It is hoped that the Sociology Department of the Natal University will be able to assist in investigating this question.

Hospitalisation

Although most cases of venereal disease are now treated as out-patients, hospitalisation is still necessary in certain cases. By way of illustrating the types of cases admitted, an analysis has been made of admissions to the venereal diseases wards of King Edward VIII Hospital during 1956. (Note: Not all such cases were admitted, as many in the following categories were treated as out-patients).

Syphilis	Primary and Secondary	550	
	Latent - Ante-Natal Cases and Mothers Admitted with Congenital Babies	99	
	Congenitals	116	765

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Gonorrhoea	Complications	81	
	Mothers with Ophthalmia Neonatorum Babies	90	
	Vulvo vaginitis	2	
	Ophthalmia Neonatorum	90	263
Ulcus Molle (Chancroid)			4
Lympho-Granuloma-Inguinale			24
Granuloma Venercum			3
Phagaedena			2
		Grand Total	1,061

The proportion of imported to City cases was 1 : 1.58. In addition 252 cases were either not in an infectious state or not suffering from V.D. and were therefore not chargeable against a local authority.

Attendances

With the increase of new cases, the number of attendances recorded have tended to increase, but the average number of attendance per new case is the same as in 1955 viz. 3.4. The proportion of attendances at the Addington clinic and the combined Municipal clinics was 1 to 16.114. The Municipal clinics averaged 90.71 attendances per session of 4.3 hours average duration while the Addington clinic averaged 12.09 attendances per session of 1.7 hours average duration.

Clinical Services

All clinics for venereal diseases are closely associated with the polyclinics of the hospitals of the Natal Provincial Administration. At the special clinics, cases from within the Municipal area (City cases) and from without the Municipal area (ex-City cases) are investigated and treated for venereal infections.

European and Coloured Clinics

The Natal Provincial Administration conducts these clinics at Addington Hospital. While sessions (with a doctor in attendance) total 10 hours per week, trained nursing staff is in attendance for 45 hours per week which facility is greatly appreciated by visiting seamen.

Non-European Clinics

The Municipal clinics, administered by the City Health Department, are situated at the King Edward VIII Hospital, Congella, and at Cato Manor. The former is a whole time clinic which functions for 50 hours a week while the latter operates two sessions of 3 hours weekly. At these clinics there is always a doctor in attendance.

Congella Clinic

This is the main clinic on which the administration and stores are centred and from which the Cato Manor clinic is staffed and maintained. Here statistics are extracted and compiled, and a large number of pathological investigations are performed by the clinic staff. During the year more than 44,000 specimens of blood were dealt with, and 5,000 slides and 2,000 specimens of urine were examined microscopically. Apart from this, 73.62% of all attendances at all clinics were registered at Congella - Cato Manor having 20.49% and Addington the remainder.

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Cato Manor Clinic

The Cato Manor Emergency Camp area has an estimated Bantu population of 31,200 males and 31,800 females (total 63,000) with a considerable number in the surrounding areas. This district is notorious for its shebeens, brothels,vice and violence. Its distance from the Congella clinic with the added inconvenience of having to change buses, has helped to popularise the two part-time clinics held in Cato Manor. During 1956 there were 4,366 new cases, 1,051 being males and 3,315 females. This disproportion in the sexes is due to the fact that the vast majority of adult males travel to the central and industrial areas each day and they find the Congella clinic more convenient to attend. Further support for this can be found in the analysis of attendances at Cato Manor:

Males under 10 years		2,099
over 10 years		517
	Total	2,616
Females under 10 years		2,653
over 10 years		7,400
	Total	10,053

Large numbers of females from Cato Manor attend as new cases at the Congella Clinic being presumably unaware of the existence of the facilities at Cato Manor. Their ignorance is difficult to understand.

They are always vague as to their length of residence there (a Bantu habit) and are gratified to hear that they need not travel so far for attention. As the clinic has been in existence since March, 1954 and is constantly being advertised by the broadcast van operating in that area, it is a fair assumption that there is a constant influx of females to Cato Manor. Although new cases and attendances have continued to increase by 12.6% and 33.12% respectively, it is anticipated that, when accommodation becomes available at Duff's Road and families are moved to that area under more stable conditions, the number of new cases will begin to fall.

Ante-Natal Clinics

All Ante-Natal clinics now take routine blood tests to detect the possibility of syphilis in cases attending there. Eighty-six cases were referred from the Ante-Natal clinics at Addington to the Special Clinic there. The Municipal Ante-Natal Clinics referred 50 positive reactors to the Congella Clinic where similar cases from the clinics of King Edward VIII Hospital were also investigated and treated.

Staff

Medical: There have been no changes in the medical staff employed in the V.D.Services. Due to sickness and extended leave, there was a vacancy for a whole-time locum tenens (European or non-European) for a period of three months. Great difficulty was experienced in filling this vacancy because of the disparity between the recognised Medical Association fees and the official rate of remuneration. Eventually two part-time locums were obtained for the last month of this period.

Nursing: No changes have occurred during the past two years.

Health Assistants: The scheme of combined T.B. and V.D. duties for the Health Assistants has continued to operate.

	European				Coloured				Bantu				Asiatic				Total.				Grand Total
	City		Imported		City		Imported		City		Imported		City		Imported		City		Imported		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
New Cases:																					
1946	302	85	316	109	150	86	186	114	5527	1971	1758	1017	242	232	36	34	6221	2374	2296	1274	12165
1947	420	116	740	5	154	108	130	23	6590	2205	2274	1198	457	278	37	39	7621	2707	3181	1265	14774
1948	434	86	579	7	166	88	59	43	6234	2026	2800	1363	637	194	187	43	7471	2394	3625	1456	14946
1949	367	74	415	7	140	107	31	46	5890	2027	3307	1681	686	190	167	32	7083	2398	3920	1766	15167
1950	335	111	305	7	217	179	21	49	5849	2046	2542	1348	706	208	110	40	7125	2634	2978	1444	14181
1951	333	98	198	5	273	219	16	45	5202	2066	2133	1221	565	151	90	28	6373	2534	2427	1299	12623
1952	314	59	156	5	245	144	23	6	5533	2208	2084	1185	487	113	101	22	6579	2524	2364	1218	12685
1953	269	79	231	11	222	173	26	5	5461	2316	2170	971	397	109	62	8	6349	2677	2483	995	12504
1954	313	41	205	7	133	156	18	6	4889	2189	1716	698	356	98	35	13	5691	2484	1974	724	10873
1955	230	33	237	5	85	66	24	5	6498	4841	1685	882	381	127	51	15	7194	5067	1997	902	15160
1956	215	24	203	10	188	85	15	5	7552	5702	1797	1136	509	317	79	25	8464	6128	2094	1176	17862
Ward Admissions:																					
1946	20	-	94	-	68	-	54	-	1750	732	1259	779	255	231	84	94	2005	1051	1343	1021	5420
1947	80	-	243	-	68	-	180	-	1409	1042	1230	1157	420	287	96	99	1977	1329	1749	1256	6311
1948	98	3	167	-	73	24	18	6	1397	983	1156	1276	34	21	15	2	1602	1031	1356	1284	5273
1949	93	7	121	-	54	21	12	5	1079	964	937	1171	17	11	9	4	1243	1003	1079	1180	4505
1950	57	51	52	2	94	138	9	6	874	935	858	1172	7	16	5	1	1039	1127	921	1179	4266
1951	52	57	38	3	95	182	3	2	1078	1195	851	1092	24	20	7	2	1249	1454	934	1093	4730
1952	25	31	11	2	49	113	5	4	1195	1176	897	1167	44	49	9	2	1313	1369	922	1175	4779
1953	12	11	15	16	26	56	6	3	910	911	819	729	18	9	2	4	966	987	842	742	3537
1954	2	-	12	-	1	5	1	1	617	521	516	496	13	12	5	3	632	538	534	500	2204
1955	-	1	3	-	-	-	-	1	274	461	203	346	6	1	1	2	280	463	207	349	1299
1956	2	2	1	-	2	3	-	-	255	427	163	235	13	10	-	2	272	442	164	235	1113

..../32.

	European				Coloured				Bantu				Asiatic				Total				Grand Total
	City		Imported		City		Imported		City		Imported		City		Imported		City		Imported		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Outpatient Attendances:																					
1946	2627	2148	648	485	2212	1464	328	258	22786	13241	4304	3628	2375	1707	56	49	34500	18560	5336	4520	62916
1947	3004	1467	1561	54	1694	3030	522	825	30301	13307	10531	6448	2715	2239	177	133	37714	20043	12791	7460	78006
1948	3243	1305	1449	20	1797	2956	210	520	28565	11954	10787	6214	2192	757	425	103	35797	16972	12871	6857	72497
1949	2384	1142	1277	69	1534	2611	111	507	27175	10272	9618	5635	1863	569	239	57	32956	14594	11254	6286	65063
1950	2133	1396	632	46	1410	2804	62	133	28248	12934	10604	6221	2049	650	201	109	33833	17587	11499	6509	69428
1951	1965	1392	424	93	1802	4249	107	210	27310	13375	10525	5715	2055	630	347	77	33132	19646	11403	6095	70276
1952	1630	1209	410	97	1534	3751	153	308	30316	14091	10960	6464	2132	741	314	55	35612	19792	11837	6924	74165
1953	1430	959	455	68	1200	3221	143	232	25429	11344	8752	4196	1490	530	213	23	29549	16054	9553	4519	59675
1954	1407	548	395	67	848	2135	47	34	17709	7336	5300	2673	1059	331	117	44	21023	10350	5859	2818	40050
1955	1219	333	410	27	677	1029	60	23	21388	15980	5530	3349	1195	471	136	63	24479	17813	6163	3462	51890
1956	1271	262	384	15	855	905	50	27	25816	20230	5561	4028	1211	930	202	95	29153	22327	6197	4165	61842
Rate of New Cases per 1,000 Population (City only):																					
1946	5.16	1.28		Total 3.09	28.41	17.30		Total 23.03	59.09	127.99		Total 68.83	4.13	4.20		Total 4.16	28.80	16.70		Total 24.00	
1947	7.06	1.73		4.23	28.17	20.96		24.68	70.53	104.32		80.58	7.62	4.89		6.45	34.90	18.68		28.43	
1948	7.22	1.27		4.06	29.46	16.43		23.11	66.78	125.64		75.45	10.35	3.32		6.92	33.86	16.18		26.76	
1949	5.78	1.12		3.40	24.10	19.20		21.70	63.10	124.29		72.27	10.73	3.21		7.12	31.27	16.28		25.37	
1950	5.49	1.64		3.55	32.87	28.78		30.89	53.97	106.98		61.92	10.81	3.34		7.17	29.14	16.97		24.41	
1951	5.31	1.47		3.33	38.62	27.75		32.89	56.32	49.10		54.06	7.63	2.12		4.93	26.97	13.49		21.00	
1952	4.71	0.79		2.69	38.92	21.66		29.83	57.40	48.25		54.43	6.39	1.67		4.08	26.93	13.00		20.74	
1953	4.05	1.12.		2.54	27.16	19.14		22.97	55.00	47.33		52.47	5.06	1.44		3.28	25.06	13.10		19.72	
1954				2.50				16.20				45.49				2.86				17.29	
1955				1.77				8.08				67.69				2.46				24.47	
1956				1.56				14.17				75.35				4.82				28.08	

NOTE: Figures corrected for sex difference

Number of Sessions:			
1954	337	565	902
1955	320	620	940
1956	299	642	941

Propaganda

The Health Education Section has co-operated with the City Venereologist in presenting film shows to susceptible audiences during the past year. Questions were encouraged and answered by the City Venereologist. In addition Health Assistants and Lecturers in the field and the staff of the clinics contributed to the dissemination of accurate information about the venereal diseases and their treatment.

Co-operation

The closest co-operation has been maintained between the various sections of the Natal University Medical School and the Pathological Laboratories of the Natal Provincial Administration. There has also been co-operation with medical practitioners throughout Natal.

Co-ordination of V.D. Services

Accommodation at the Clairwood Hospital for an out-patient clinic has not yet been made available, though there are hopes that it will be.

The erection of a polyclinic building north of the Umgeni appears to be the only hope of establishing a district clinic in that area. Investigations in this direction are preceeding. A survey has been made of the Duff's Road area with a view to establishing a clinic there. Suitable premises already exist and application has been made for their allocation to this service.

VI. IMMUNISATION

Considerable advance was made during the year to place the immunisation service on an improved footing and a review of the progress made may be considered under three headings, namely: (1) the subjects at risk; (2) staff and organisation; and (3) research.

(1) The Subjects at Risk

In homogenous populations such as are found in Great Britain, on the Continent, and in Canada, the problem of carrying out full-scale diphtheria immunisation programmes, directed towards protecting a high percentage of the population at risk, is a relatively easy one. In the Union, and especially in a City like Durban, many difficulties are encountered and amongst these is the apathy, indifference and ignorance prevalent amongst all racial groups but more especially found amongst the Bantu. But these attitudes are by no means confined to the Bantu; even Indian parents are fairly unco-operative as regards their children in the pre-school age-group and, surprisingly enough, the response from Europeans often leaves much to be desired.

When, however, the children enter school and are catered for by the Department's school immunisation service, the picture changes and a far greater measure of co-operation is forthcoming. But, of course, before this stage is reached, quite a number of infants and children have paid the price, sometimes with their lives, of their parents' neglect and folly. It is during the earliest years of life that so much can be done to protect children against the ravages of diphtheria - yet, despite Council's provision of free immunisation facilities available in various parts of the City and despite the propaganda and health education efforts of the Department, many parents remain quite unconcerned as to the risks run by their children.

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Another great difficulty is of course, the well recognised disinclination of Bantu parents, and sometimes even Indian parents, to present their children for immunisation on more than one occasion. This may be attributable, at times, to ignorance; more often than not it appears to be due to nothing more or less than sheer laziness.

Nevertheless, during the year, the Department was hopeful that by the adoption of new approaches it would be in a position to surmount many of these obstacles and to protect far more pre-school children than had hitherto been the case. For instance, it enlisted the co-operation of the Indian Child Welfare Society and of certain Bantu Advisory Boards. In addition, measures were taken to enlist the assistance of Bantu clergymen who were most co-operative and set about preaching an additional gospel and doctrine to their congregations. An appeal was also made to the Bantu people by means of the monthly news-letter, with a circulation of several thousand, issued by the Native Administration Department.

Another line of action, already mooted but so far without success, lies in the direction of making it a pre-requisite condition on all non-European families about to occupy houses provided by the Council that the members thereof shall be vaccinated against smallpox when necessary, and that all unprotected children shall be immunised against diphtheria.

(2) Staff and Organisation

Owing to an outbreak of poliomyelitis, the immunisation programmes against diphtheria, whooping cough and tetanus were suspended until May. However, with the assistance of additional temporary staff, the backlog of work in the schools and clinics was thereafter overtaken and by the end of the year, all children for whom applications had been received were duly immunised.

At the beginning of 1956, it was still envisaged that poliomyelitis immunisation would be confined to the winter months and the Department's immunisation plans for 1956 were based on that assumption. At that period it was considered that the position called for the provision of more staff, not only to keep up the impetus already given to this work during 1955 but also to meet the demands of a greater number of pre-school children and school children who required protection. The probability of an intensive anti-poliomyelitis campaign during the months of May, June and July had also to be faced and it was felt that the calls on the staff during those months would be so heavy that immunisation against the other diseases would have to be suspended. Such a situation implied that the Department's activities against those diseases would have to be stepped up during the remaining nine months of the year.

Hitherto, it had been the practice to carry out immunisation at non-European schools without the attendance of a medical officer but it was now felt that, for the future, the immunisation of all children of all races should be carried out under medical supervision and control.

In order to make the scheme as flexible as possible, it was proposed that the Medical Officers should be drawn from a 'pool' on a part-time basis and that only the number required at any time should be called upon.

In March, the Council approved the engagement of part-time Medical Officers on the above basis and also approved the engagements of one Temporary Clinic Sister and one Temporary Lady Assistant

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for a period of twelve months. At the same time the non-European establishment was also amended by the addition of one Indian Health Assistant for duty in the Immunisation Section.

However, as no vaccine was forthcoming, the full winter campaign against poliomyelitis did not take place as contemplated. In fact it was not until about the middle of May that a circular was received from the Poliomyelitis Research Foundation regarding the issue of vaccine and requesting particulars at an early date of the Department's requirements for vaccine in the various age-groups.

On receipt of the above circular applications were invited from the public through the medium of the press and by radio. The closing date for applications was the 6th June, 1956. As, during the previous few months, the public had become more conscious of the benefits of immunisation against poliomyelitis, the response to the appeal was encouraging and by the above date a total of 5,328 applications were received. These comprised Europeans 2,848, Coloureds 181, Bantu 994, and Asiatic 1,305. Within three days a further 163 late applications were received. In passing, it may be mentioned that by the end of the year 10,207 applications were received as follows: Europeans 6,140, Coloureds 498, Bantu 1,690 and Asiatics 1,879.

As few applications had been received from the Bantu owing to the very limited extent to which press and radio announcements reach this section of the community, it was deemed necessary to make special provision for them.

A requisition was therefore placed for sufficient vaccine to immunise 10,450 subjects.

Preparations to start the poliomyelitis immunisation campaign, even at short notice, were then put in hand. It was decided that the main immunisation clinic for all races should be located in the premises of the Child Health Section at the Department's Headquarters. This venue was selected because of the staff facilities it afforded and also on account of its accessibility by bus and its convenient parking arrangements. It was considered that, if more venues were needed, a number of the other static clinics could be brought into commission. The mobile immunisation van was available for the extension of the service to those non-Europeans living in the outlying districts.

Owing to the amount of documentation it entails, the attendance of a number of record clerks is very necessary at all poliomyelitis immunisation sessions, and, as the Department was short of staff in this respect, an approach was made to the three Voluntary Organisations for assistance. This co-operation was immediately forthcoming and the Department wishes to record its grateful appreciation to the St. John Ambulance Brigade, the South African Red Cross Society and Die Suid Afrikaanse Noodhulpliga, and the members concerned, for much valuable help received in this connection.

Poliomyelitis vaccine was received on the undermentioned dates and in the quantities stated:

17.7.56:	125 doses to complete the course of those children who had received their 1st and 2nd injection during 1955.
22.8.56	2,200 doses
29.9.56	2,000 doses
9.10.56	2,050 doses
Total	6,375

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The first poliomyelitis immunisation session was held on the 30th August, 1956.

In accordance with instructions received from the Foundation, only children under the age of six years were immunised during the year, owing to the limited supplies of vaccine available.

Apart from the session held for all races at the Child Health Clinic, sessions for Indians were held at Sydenham, Clairwood and at Springfield, for the Bantu at Chesterville, Cato Manor (Ridge View and Booth Roads), and at the Umlazi Glebe Lands, and for Coloureds at Mayville.

During the course of the year, it was announced that it would no longer be necessary to restrict the poliomyelitis service to the winter months but that it could, in fact, operate all the year round. Further, it became apparent that probably ample supplies of vaccine would become available in the near future, sufficient at any rate, to meet the City's needs. The public, too, became increasingly confident of this procedure and more and more applications were received from parents of all races requesting that their children be immunised.

At this time it was estimated that the number of children in the City under the age of 15 years was 145,633 composed as follows: Europeans 40,468, Coloureds 7,543, Bantu 24,043 and Asiatics 73,579. In view of these facts it became apparent that it would be necessary, in order to cope with the increased work during the coming year, not only to retain the temporary staff (Clinic Sister and Lady Assistant) for the whole of the financial year i.e. for a further five months until July, 1957 but also to engage additional staff, a step which was approved.

Ultimately towards the end of the year, it was recommended that the temporary positions be abolished and the establishment of the Department be amended to provide for the permanent employment of two additional Clinic Sisters, two Lady Assistants and two non-European Health Assistants. In addition, authority was sought for the engagement of part-time Clinic Sisters to be drawn from a 'pool' as and when required on the same lines as those organised for Medical Officers.

In December, the Council approved these recommendations and the year ended with the staff establishment of the Immunisation Section so increased as to be in a position to carry out the Department's programmes during 1957 without any difficulty.

(3) Research

During January, the Department wrote to Dr. J.H.Mason Superintendent of the Serum Department, South African Institute for Medical Research, concerning a number of local reactions following the injection of one of the Institute's diphtheria prophylactics.

It was pointed out how desirable it was to reduce the number of such reactions to a bare minimum especially amongst non-Europeans as the parents of reactors could easily, by means of gossip, jeopardise the attempts of the Department to promote this public health measure. In addition, it was pointed out that an abnormal amount of school absenteeism could quite materially affect the grants paid by Government to non-European schools and that, should this occur, the Department could easily lose the good-will and support of the principals and teachers concerned.

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There then followed a most useful and valuable exchange of correspondence during the course of which not only the probable cause of the reactions was incriminated but also a useful schedule of dosage for the various age-groups was compiled. In addition, the Department obtained a clearer picture of the techniques and laboratory procedures used in the preparation of diphtheria antigens.

During the course of this correspondence, Dr. Mason expressed a desire to assay diphtheria antitoxin levels of unprotected Indian children in the different age-groups. An investigation on similar lines had some time previously been carried out on Bantu children in the Transvaal. Three batches of blood from 301 Indian children, between the ages of 13 months and 14 years, were collected by the Department and forwarded to the Institute. In due course the results of the assays of the different batches became available to the Department.

It then became possible to place the diphtheria immunisation service for Indians on a scientific basis and to advance this aspect of the work in the certain knowledge that the Department's efforts would achieve optimum results for the time and labour expended.

Subsequently, Dr. Mason requested information regarding the incidence of diphtheria in Indian children and the age-groups of such children in which the disease was most prevalent. For this purpose the Department's notifications were scrutinised and analysed over a period of six years from the 1st July, 1950 to the 30th June, 1956. It then emerged that "there was a close correlation between the incidence of and death rate from diphtheria and the antitoxin content of the sera. The older the child, the less was the incidence and particularly the mortality and the higher was the percentage protective serum levels."

It was felt that the results of this investigation should go on record and as the year ended a paper on the subject was in the course of preparation for publication in the "South African Medical Journal".

(4) Statistics

The following tables reflect the number of injections given by the Department during 1956:

Diphtheria

(a) Diphtheria

	Pre-School					School-Age				
	E.	C.	B.	A.	Total	E.	C.	B.	A.	Total
1st Injection	194	139	1,362	1,129	2,824	1,060	642	2,492	6,669	10,863
2nd Injection	111	140	568	711	1,530	901	762	2,261	5,905	9,829
Booster	385	31	9	38	463	1,641	168	5	536	2,350
Total	690	310	1,939	1,878	4,817	3,602	1,572	4,758	13,110	23,042
						Grand Total				27,859

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(b) Combined Diphtheria and Whooping Cough

	E.	C.	B.	A.	Total
1st Injection	1,083	269	293	310	1,955
2nd Injection	884	203	149	193	1,429
3rd Injection	736	172	95	163	1,166
Total	2,703	644	537	666	4,550

(c) Combined Diphtheria, Whooping Cough and Tetanus

	E.	C.	B.	A.	Total
1st Injection	-	-	15	23	38
2nd Injection	-	-	4	14	18
3rd Injection	-	-	2	6	8
Total	-	-	21	43	64

The following tables reflect the number of injections given during the year by the Institute of Family and Community Health:

(a) Diphtheria

	E.	C.	B.	A.	Total
1st Injection	-	4	97	15	116
2nd Injection	-	2	83	15	100
Booster	-	-	-	4	4
Total	-	6	180	34	220

The figures for Springfield Health Centre were Coloureds 21.

(b) Diphtheria and Whooping Cough

	E.	C.	B.	A.	Total
1st Injection	-	3	346	82	431
2nd Injection	-	2	257	65	324
3rd Injection	-	2	191	48	241
Booster	-	3	1	-	4
Total	-	10	795	195	1,000

The figures for Springfield Health Centre were Indians 565, Coloureds 50.

(c) Diphtheria, Whooping Cough and Tetanus

	E.	C.	B.	A.	Total
1st Injection	-	-	217	42	259
2nd Injection	-	-	150	30	180
3rd Injection	-	-	144	21	165
Total	-	-	511	93	604

Smallpox

Vaccinations against smallpox was undertaken at all clinics and by means of mobile clinic sessions in the densely populated out-lying districts. During the year, the following number of persons presented themselves for vaccination:

	E.	C.	B.	A.	Total
City Health Department	3,662 (1,810)	1,085 (753)	4,527 (6,448)	4,255 (10,534)	13,529 (19,545)
Municipal Native Administration Department	- -	- -	114,688 (119,081)	- -	114,688 (119,081)
District Surgeon	3,239 (2,733)	- -	7 (6)	545 (517)	3,791 (3,256)
Institute of Family and Community Health	- -	5 (19)	527 (33)	- (100)	532 (152)
Springfield Health Centre	- -	157 -	* (25)	72 (45)	229 (70)
Total	6,901 (4,543)	1,247 (772)	119,749 (125,593)	4,872 (11,196)	132,769 (142,104)

Poliomyelitis

The following injections were given during the year:

Race	1st Injection	2nd Injection	3rd Injection	Total
European	2,293	109	107	2,509
Coloured	421	10	-	431
Bantu	1,651	-	-	1,651
Asiatic	1,813	-	-	1,813
Total	6,178	119	107	6,404

Typhoid

(a) Typhoid Control

Clinic sessions were held twice a week, when selected groups of food-handlers were vi-tested and immunised against typhoid. Those vi-tested comprised 19 Europeans, 4 Coloureds, 1,405 Bantu and 144 Asiatics. The following injections against typhoid were administered to those reporting at the Clinic:

	E.	C.	B.	A.	Total
1st Injection	58	4	1,459	78	1,599
2nd Injection	35	2	1,171	22	1,230
Booster	2	-	151	25	178
Total	95	6	2,781	125	3,007

Typhoid immunisation carried out by the Institute of Family and Community Health is shown below:

	E.	C.	B.	A.	Total
1st Injection	-	2	131	33	166
2nd Injection	-	2	57	14	73
Total	-	4	188	47	239

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VII HEALTH INSPECTION AND SANITATION

Nuisances:

The health inspectional staff was called upon to investigate a large number of complaints of unhygienic conditions, relating to such varied matters as rank overgrowth of vegetation on vacant lands adjacent to occupied premises, mosquito development, pests, smoke and smell emission, uncleanliness, insanitary poultry keeping, structural and drainage disrepair. Necessary action was taken in all cases to abate nuisances.

The occupiers of premises on a section of the inner Bluff ridge suffered much inconvenience consequent upon the use of "fly-ash" refuse from the Electricity Supply Commission's Congella Power Station for reclamation of portion of the Bayhead lands. Under dry and windy conditions this "fly-ash", which is very light and in a finely divided state, became air-borne and was carried by the wind to private premises over a wide area. The responsible authorities were approached and suitable remedial measures were formulated. The trouble now appears to have been effectually overcome.

Non-provision of sanitary accommodation for the use of builders' workmen engaged on new construction projects was the cause of a number of nuisances. All building contractors in the City have been warned of the need to provide suitable temporary sanitary conveniences for their employees and Health Inspectors make a point of checking up to ensure that By-law requirements are complied with. In this connection it became necessary to institute legal proceedings against a number of offenders.

In September there was an increase in the number of complaints received respecting offensive smells at the Bluff, alleged to emanate from the oil refinery. Investigations were made by the Department and the information obtained was then referred to the City Council's Air Pollution Consultant (Mr. H.G.Howson) and to the management of the refinery.

The advice and assistance of the Air Pollution Consultant was sought in dealing with a number of complaints concerning excessive smoke emission from domestic and factory premises. His ready co-operation and help at all times was much appreciated. On several occasions it was demonstrated conclusively to offenders that a different firing technique and provision of supplementary air reduced smoke emission to negligible proportions.

The prevalence of flies at the Municipal Abattoir and surrounding premises occasioned the Department much concern. The cource of fly-breeding was traced to sweepings and manure from cattle trucks which had been left for unduly long periods on railway sidings and marshalling yards, adjacent to the Abattoir, before removal. The matter was taken up with the South African Railways Administration and arrangements for systematic spraying of this material with insecticide as a temporary measure were put in hand. It is understood that the Administration has in mind a scheme for the cleansing of cattle trucks at some point distant from the Abattoir, possibly at the new Bayhead marshalling yards.

The absence of caravan camping facilities within the City results in visitors who are unable to obtain hotel accommodation camping on Municipal property at the Beach and Snell Parade areas, particularly during the crowded July season. Insanitary conditions inevitably arise from this unlawful and uncontrolled camping and, until proper facilities are provided for that type of visitor, there is very little that can be done to prevent the occurrence of nuisances.

European Government Schools: Greenwood Park Area:

As an outcome of complaints made to the City Council respecting the unsuitable sanitary accommodation provided at these schools, representatives of the Department accompanied Dr. J.Krigler of the Union Department of Health on a survey. It was obvious that the only solution lay in the provision of water-borne drainage and the matter was thereupon referred to the City Engineer for his consideration. It is pleasing to be able to record that the City Council authorised the provision of the necessary funds for sewer extensions and the Government authorities have already connected up one school to the sewer and work in the case of another is in progress.

Stormwater Drainage: Virginia:

The discharge of waste water into the stormwater drainage system at Virginia resulted in the creation of unsatisfactory conditions at the outfall. The City Engineer has undertaken to construct a new concrete outlet to the existing drain which should improve conditions pending the provision of reticulated sewerage at some future date.

Sewerage:

The extension of reticulated sewerage to all areas within the City must be the ultimate aim of the City Council. Although this stage has not yet been reached, figures supplied by the City Engineer reveal that during the Municipal year 1955/56 good progress was made and approximately 25 miles of new sewer mains were laid. Over the same period 712 individual premises were connected to sewers.

When it is appreciated that the majority of these new mains have been laid in the non-European areas of the City, where primitive sanitary drainage arrangements obtained, the improvement in health standards cannot be too strongly expressed.

Pollution of Durban Bay:

The Special Committee re Pollution of the Bay, which was established by the City Council on 1st December, 1952, and on which this Department is represented, continued to function throughout the year. A direct outcome of the activities of this body was the appointment of two Assistant Chemists and two Trade Waste Inspectors in the City Engineer's Department for the purpose of preventing trade waste disposal into stormwater drains and ultimate discharge into the Bay. The efforts of the Special Committee are bearing fruit, as is evidenced by the improvement which has taken place in Durban Bay.

Refuse Removal Services:

The City Engineer advised that his inability to extend a regular refuse removal service to certain areas of the City was due to insufficiency of vehicles. It is hoped that additional funds will be made available in the next financial year which will admit extension of refuse removal services to the unserviced areas.

Factory Canteens:

Industrialists throughout the City have become most conscious of the necessity for providing canteens for their employees. Numerous requests for advice have been received and this Department's requirements have invariably been incorporated when canteens have been installed. Routine inspections have disclosed that a very high standard of hygiene is maintained in these canteens.

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Duff's Road Indian Township:

A housing survey of the above township was carried out for the purpose of obtaining certain information required in connection with the City Council's projected Bantu housing scheme.

Homes for Aged Persons:

Under the direction of the Chief Regional Health Officer/Natal a survey of all institutions catering for aged persons was made. Comprehensive schedules covering all phases of accommodation, food-handling and preparation amenities, manner of conduct and the like were compiled.

Food Hygiene:

City Markets: Routine inspections of all food-stuffs of a perishable nature were carried out on all trading days.

Condemnations did not reach unduly high proportions and varied from time to time in accordance with the period of the year, holiday storage and occasional delays in transportation.

In all cases the necessary procedure covering destruction and issue of condemnation certificates was followed.

Chemical Analyses of Foodstuffs: Each month a prescribed number of food samples was purchased and submitted for chemical analysis. Samples included the following items: minced meat, sausages, boerewors, polonies, curry powders, tea, coffee, pepper, honey, white bread, salt, cooking oils and fats, mealie-meal, flour, mayonnaise, chutney, dripping, lard, fruit squashes, fruit syrups and margarine.

Prosecutions were instituted against various butchers for selling minced meat containing prohibited preservative and/or selling sausages containing preservative in excess of the permissible amount.

In connection with one sample of honey the certificate of analysis showed it to contain sucrose to the extent of 9.40% - the permitted maximum being 5%. Investigation disclosed that the producing apiary was in a sugar cane area and that intentional addition of cane-sugar to the honey could be discounted. Though the Department was disinclined to prosecute, the producer was informed that his honey was not in accordance with the requirements of the Regulations framed under the Food, Drugs and Disinfectants Act. The producer, subsequently advised that certain of his hives would be re-sited further afield from established sugar cane stands.

In the circumstances the advice of the Secretary for Health, Pretoria, was sought who (a) advised against a prosecution and (b) intimated that the matter had been referred to the Division of Entomology, Department of Agriculture, which is at present considering the drafting of honey standards under the Marketing Act.

Water Sampling: Each week samples of the City's Municipal water supply were submitted to both chemical and bacteriological examination. A satisfactory standard of purity was maintained.

Illegal Meat Traders: Unhygienic conditions, due to activities of illegal meat traders, arose in Somtseu Road and its vicinity and it became necessary for this Department to enlist the aid of the South African Police. Over a period, 8 Bantu males were arrested

for selling meat and offal which was displayed on pieces of paper in the roadway and thus exposed to gross contamination. In all, the accused paid fines totalling £46 and the magistrate issued a warning that a serious view would be taken of any further trading of this nature.

Subsequently a talk was broadcast by the Departmental health education unit on the danger of buying meat handled under such unhygienic conditions by illegal traders, the result of the prosecutions and the magisterial remarks on the subject.

Food Traders in Municipal Institutions: Traders in foodstuffs in the Dalton Road Barracks were found conducting business under most unsatisfactory conditions. Contributing factors included floor congestion, lack of washing facilities for (i) utensils, (ii) equipment and (iii) food-handling personnel, absence of suitable kitchen and food-preparation accommodation.

In view of the close proximity of the Bantu eating house and shopping centre in Sydney Road the above trading facilities inside the barracks are considered unnecessary. The matter has been taken up with the Native Administration Department.

Beach Caterers: Following upon check inspections at the beaches on weekdays and Sundays several prosecutions were instituted for contraventions of the Food By-laws including unhygienic methods of service, dirty clothing, failure to provide protective apparel and use of chipped and defective crockery and equipment. In some instances both waiters and employers were charged.

Race-course Catering: Inspections were carried out at race meetings in connection with food-handling, food-storage and dish/utensil sanitation. Conditions were found to be satisfactory and advice given regarding any necessary precautionary measures were acted upon speedily.

Butcher's Vehicles: Attention is being directed to the type and condition of meat delivery vehicles and the malpractices of certain crews. Abuses, such as employees reclining on carcases or their coverings and the use of dirty or unsound clothing, coverings or hoods, will be more severely dealt with in future.

Observations are now being maintained as vehicles load at and leave the Abattoir premises. Every assistance is being received from the staff at the Abattoir.

Hawkers/Pedlars: The Department inaugurated a programme aimed at improving the standard of the vehicles used by pedlars engaged in selling fruit and the like in the vicinity of the non-European bus ranks in the Warwick Avenue locality. The high cost of suitable vehicles has slowed up the programme to some extent but, nevertheless, a marked improvement in the type of vehicles has been achieved.

Food-handling Hygiene Survey: During the year a survey of all hotels, boarding houses, restaurants, sandwich service establishments and other food-handling businesses was undertaken.

With the object of circumventing any possible outbreak of food-poisoning all conditions and practices at these premises were reviewed and details recorded on special survey forms. These records will facilitate control of food-handlers and premises.

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Trading Premises: A considerable amount of structural and other improvement work, for the purpose of remedying unsatisfactory health features associated with trading premises, was either completed or commenced.

The photographs of a butchery and private hotel kitchen, before and after reconstruction, which appear in this report, are typical examples of improvements being effected to food establishments throughout the City.

Nursing Homes: Under the procedure hitherto followed it was possible to establish private nursing homes in Durban by obtaining registration with the Director of Provincial Medical and Health Services, without prior reference to this Department.

Following upon representations to the Director of Provincial Medical and Health Services, satisfactory arrangements were made for (a) joint inspections of all existing private nursing homes by the Medical Inspector of Nursing Homes and representatives of this Department with a view to rectification of any structural or other conditions which affect this Department, and (b) new applications to be referred for the Department's comments before finalisation. A summary of conditions at each nursing home was completed and a copy furnished to the Director of Provincial Medical and Health Services.

It is anticipated that beneficial results will emerge from this liaison.

Laundries, Dry Cleaners and Dyers: A survey of all laundries and dry cleaning and dyeing establishments was carried out during the year and conditions generally were found to be satisfactory. Contraventions discovered were mostly of a minor nature and verbal intimations were given in most instances. However notices were served in those cases where general renovations and repainting of the premises was deemed necessary. Subsequent inspections carried out revealed that in nearly every instance these renovations were in progress.

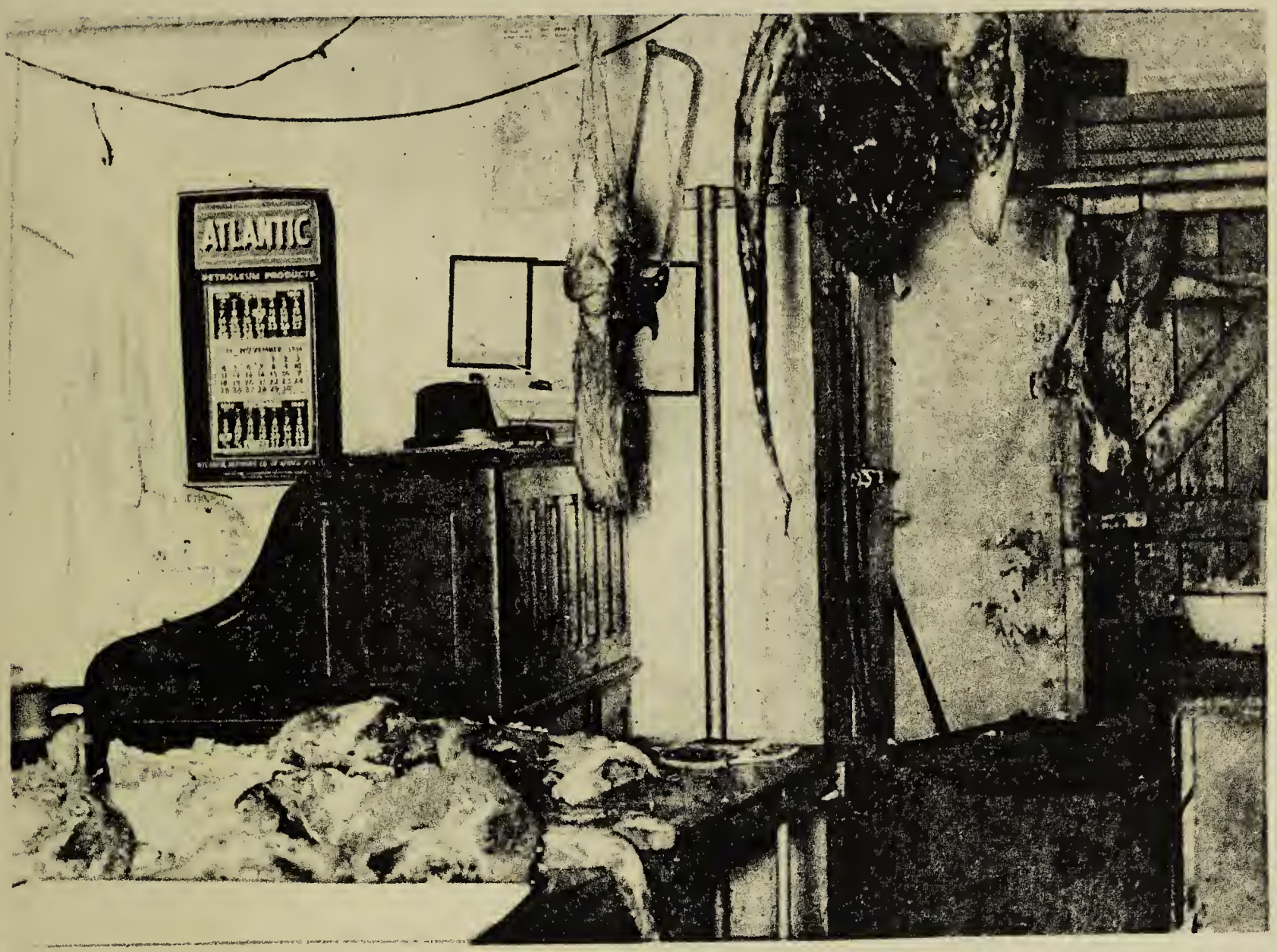
Most of the laundries and dry cleaning establishments have been in existence for many years and with the increase of population there has been a corresponding growth in volume of business conducted. However, expansion of premises has not kept pace for various reasons not under the control of the proprietors, such as premises hired under lease and the owner is not prepared to undertake extensive alterations or improvements to cope with the increased business. Certain property owners, who are anxious to carry out structural alterations and modernise their premises, are unable to raise the necessary money owing to the difficult state of the financial market.

Umlazi Glebe Lands and Cato Manor Emergency Camps: In terms of the Rules for the Administration and Control of these two Emergency Camps for Natives, this Department is required to submit a bi-annual report on the health and sanitary conditions thereat from which the following comments have been culled:

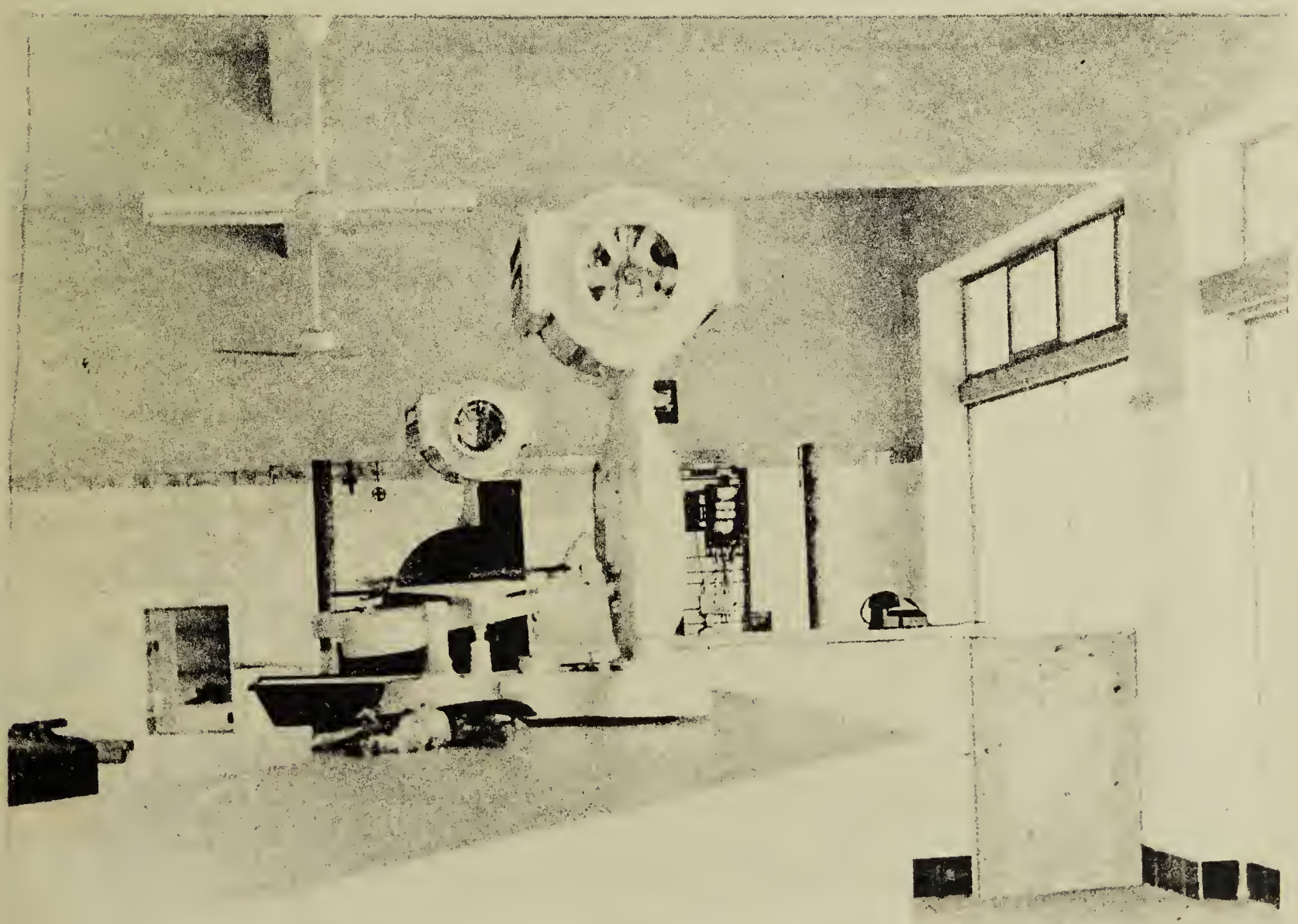
Umlazi Glebe Lands

The storm water drainage system has been extended to recently constructed houses and roads. This has had the effect of materially assisting in the retention of soil around the houses.

Suitable facilities have not yet been provided for the washing of clothes. Laundering is still being carried on beneath water stand-pipes and waste water therefrom is discharged directly into the storm water drainage system.

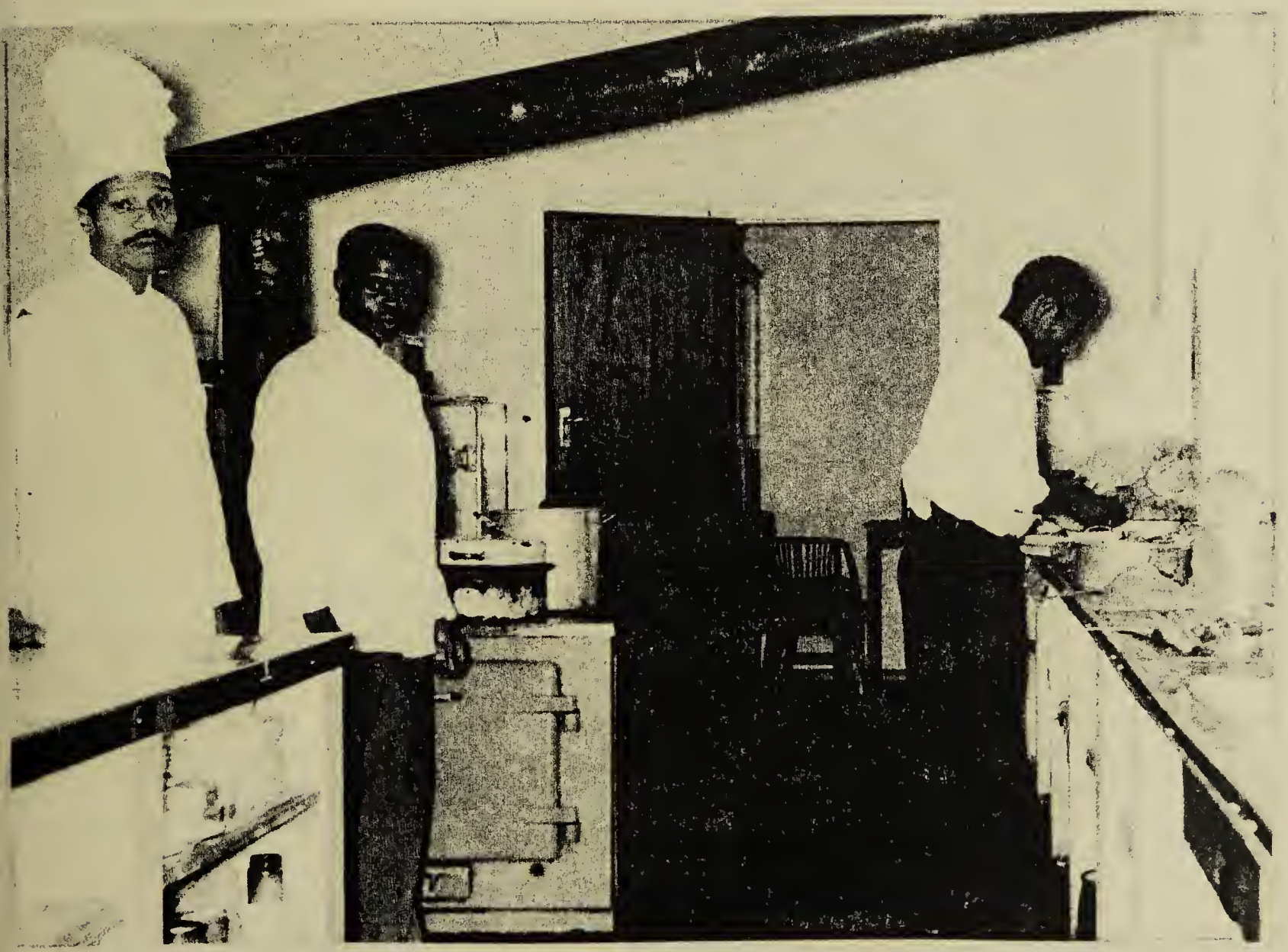


BUTCHER'S ESTABLISHMENT BEFORE RECONSTRUCTION



SAME BUTCHER'S PREMISES AFTER RECONSTRUCTION

AN UNSATISFACTORY HOTEL KITCHEN. NOTE LACK OF STORAGE SPACE; INADEQUATE PREPARATION AREA.



THE SAME KITCHEN AFTER RECONSTRUCTION.

It was noted that a number of refuse receptacles were in a damaged condition due to rough handling and, furthermore, spillage of refuse was taking place during removal operations. These matters were taken up with the responsible Department.

Attention has previously been drawn to the absence of suitable ablution facilities and it can now be recorded that plans and estimates of cost have been prepared for the provision of these amenities.

The number of water supply stand-pipes has been increased so that all dwellings are now within 100 yards of a water point. The water pressure has also been improved.

The Camp has been regularly surveyed by two Bantu Health Assistants at appropriate intervals in connection with mosquito control. Inspections of houses and vacant sites numbered 1,768. Necessary remedial measures were taken in all instances where mosquito breeding was discovered. No aedes mosquito development was found. Regular spraying of open drains and swampy areas was maintained and this factor, together with the rigid control measures maintained by the staff of the Municipal Native Administration Department, has greatly reduced potential breeding areas.

Regular anti-rodent measures were carried out.

Apart from the foregoing, the sanitary conditions in this Camp have been satisfactory.

Cato Manor Emergency Camp

There has been a very noticeable improvement in camp sanitation particularly in refuse collection and removal.

A refuse tip, which was established in the latter part of the year, gave rise to fly nuisances at its inception but the introduction of improved control measures greatly reduced the incidence of flies. Incidentally this refuse tip will ultimately result in the elimination of a swampy area.

The existence of illegal shops, particularly those dealing in foodstuffs, has caused the Department much trouble. However, appropriate action in terms of the controlling legislation was initiated by the Municipal Native Administration Department and legal proceedings were instituted against seven of these unlicensed traders.

The provision of service roads and reticulated sewerage in Area 1.B were completed and the erection of sanitary and ablution blocks is expected to be commenced at an early date.

Arrangements have been made to instal water-borne sewerage and provide improved road access to Area 4, a notoriously bad section of the Camp, which is in urgent need of sanitary improvement.

Although many parts of the Camp are now entirely satisfactory insofar as sewerage, refuse removal and maintenance of cleanliness are concerned, difficulties are still being encountered in other sections due to the absence of suitable storm and surface water drainage and nuisances associated with animal keeping and uncleanliness of sites.

Considerable improvement was noted in the formerly bad areas known as "Driehoek" and "Jeep Coat" (Area 4).

Fifteen Bantu labourers are fully employed on the collection and concentration of refuse at points accessible to the Cleansing Section's vehicles.

Open air meat and offal sellers were very active in spite of periodic raids and prosecutions by the South African Police. The solution of this problem is tied up with the elimination of all illegal traders.

Whilst there has been an undoubted improvement in the overall picture of sanitation in this Camp it must, so long as it exists as a shanty settlement, it will give rise to concern to this Department. The ultimate solution lies in the total removal of the Bantu inhabitants to approved housing elsewhere. Commencement by the City Council of the massive Kwa Mashu Housing Scheme at Duff's Road on the North Coast, to which the Cato Manor inhabitants will be removed in due course, heralds the elimination of this Camp in the not too distant future.

Other health services provided by the Department at the two camps are covered by comments under appropriate Sections.

VIII ATMOSPHERIC POLLUTION

Towards the close of 1955 the City Council decided that arrangements be made with Mr. F.G.Howson, O.B.E., B.Sc., F.R.I.C., F. Inst. Pet; to resume and continue his investigations of and work in connection with atmospheric pollution in the City (upon which he had been engaged during the month of October, 1955) for a period of six months during 1956, covering the winter months, and at the end of that period to submit a written report to the Council thereon.

Mr. Howson duly carried out his investigations and submitted a very useful and informative report embodying certain recommendations.

The following comments on smoke abatement are included by courtesy of the City Engineer:

"The Air Pollution Control Engineer, Mr. K.R.Johnson, arrived in Durban on the 23rd October, 1956, to take up his new duties in the City Engineer's Department.

Prior to this, from May to November, 1956, a considerable amount of work had been done by Mr. H.G.Howson, the Air Pollution Consultant from overseas. In order to give some idea of the ground that has been covered to date, the following summary is submitted:

MEASUREMENTS

Prior to the arrival of Mr. Howson, arrangements had been made with the Council for Scientific and Industrial Research for the establishment of measuring stations at the City Hall, the Congella Fire Station and the Wentworth Fire Station. Regular readings have been taken over some eighteen months to determine the amount of smoke, sulphur dioxide and deposit rates.

TALKS AND VISITS

As a first step in the reduction of atmospheric pollution in Durban it was considered that the main objective should be to induce smoke mindedness by encouraging the will to co-operate in

achieving a reduction of smoke emission. Contact was therefore made and maintained with the responsible representatives of the various interests concerned and talks illustrated by appropriate films were given to numerous associations, including the Chamber of Industries, Laundries and the Rotary Club. The main films used were "Fire without Smoke", depicting the Fuel Research eliminator door, and "Guilty Chimneys" which shows how the smoke problem can be tackled by the use of smokeless fuels to form clean air zones which eventually could be linked up to cover the whole city. The interest and enthusiasm displayed at these meetings was reflected on a national scale when Mr. Howson presented his paper "The Path to Cleaner Air" at the Public Health Congress held in Durban during October, 1956, at which resolutions concerning air pollution were subsequently passed. This co-operative approach to the problem was put on a firm footing by the formation of a Cleaner Air Consultative Committee on which, apart from Council's representatives, the following were represented at the first meeting on the 9th November, 1956:

Hotel Association of Durban and District.
Natal Chambers of Industries.
Natal Associated Collieries (Pty.) Ltd.
Natal Laundries, Cleaners & Dyers Association.
Hotel Association (Non-Liquor) Natal, and the
Electricity Supply Commission.

To induce smoke mindedness through reasoned argument over a wider circle of interest, many visits were paid to industrial works, laundries and hotels. It proved advantageous to be armed with records of smoke observations on first visits, as the need for better stoking was then clearly indicated and the knowledge that subsequent observations would be made kept the staff smoke conscious. In all, over 200 such visits were made and numerous complaints were also investigated, ranging from hotels in the Beach area to factories in the Congella/Mobeni area.

MEASURES ADOPTED TO ABATE POLLUTION

Training Stokers:

As bad stoking was invariably one of the main factors contributing to smoke emission, methods were devised to instruct stokers. This was done by courses at the Technical Colleges for European supervisory staff and Indians.

To get the facts over to the many Bantu stokers, however, a Bantu was selected and trained as a stoker demonstrator. After intensive practical experience on a variety of hot water stoves and boilers, he then instructed other Bantu stokers in their own language on their own plant. This proved most successful and his services, which are free, are very much in demand. It is hoped that more Bantu stoker demonstrators can be trained and employed in this direction.

Zulu Pamphlets:

The attention to the Bantu stoker is being backed up by short pamphlets in Zulu on the stoking of hot water stoves and hand-fired boilers. These have yet to be illustrated and printed.

Natal Associated Collieries (Pty.) Ltd., also prepared and distributed pamphlets to consumers.

Smoke Abatement Zone:

As a trial, the area bounded by Umbilo Road, McDonald Road, Melbourne Road and Moore Road was established as a smoke abatement

zone. The area was first surveyed and all places where solid or liquid fuel was burned were visited. The number of chimneys was 24 and their heights varied from 20 ft. to 100 ft. All boilers and plant were inspected and advice given on smoke abatement. The dead line taken was Monday, 22nd October, and from this date smoke emission was observed and recorded for each chimney according to Ringelmann Chart numbers. The records were being furnished weekly to each individual interest.

Emissions on the first three days were satisfactory and indicated what could be done by genuine effort, but the improvement did not last and it became necessary to visit the several offenders to induce their more sustained interest. The furnishing of individual records, now in hand, should be a spur.

It will take time for managers and stokers to develop smoke consciousness as a habit but constant pressure, reasoned argument on fuel saving and the appeal to make the zone a good example should ultimately bring the desired results. The effort continues.

Fuel Research Smoke Eliminator Door:

A firm of mechanical engineers has now arranged to manufacture the Fuel Research Smoke Eliminator Door and the first one, fitted to their own boiler, has proved effective in reducing smoke emission. They are also to manufacture a low resistance dust collector.

South African Railways:

It was agreed after much discussion that the South African Railways should appoint their own full-time Smoke Abatement Officer. Stoking instructions were issued to all concerned and smoke abatement notices were to be posted in prominent positions in engine cabs. Over-fire air jets are also to be tried out when sanction from their Head Office is obtained.

Whaling Station:

Operations were inspected and the following means were recommended to reduce objectionable odour:

(1) That "stick liquor" tanks should have welded steel roofs instead of present loose wooden tops covered with asphalt roofing felt. The latter tend to cause malodorous leakage at their edges.
(2) That such tanks should be vented into small chemical scrubbers; sodium hypochlorite was suggested for trial.
(3) The steam coil exhausts of these tanks should be connected into a common line discharging at a distance. At present warm condensate dropping on the ground and steam cause and carry odour through their effect on any tank leakages (tanks rest on short piers).
(4) Provide a recording water meter to measure amount of scrubbing water.

These remedial measures are to be adopted during the present "close season".

Oil Refinery:

From the daily observations it would appear that there has been some odour improvement, but room for improvement still remains.

The odour arises mainly from the effluent but the best that can be said is that the intensity is much reduced. Plans were also also completed for a special furnace to burn the gases evolved by deodorising. It will have larger diameter gas connections and water seals instead of flash gauzes which will reduce back pressure and permit more flue gas to be used for deodorising. Erection was about to be submitted for local contract. The developments will be watched with interest in the hope of further odour improvement.

Measuring Air Pollution:

An instrument designed to record the hourly variation of smoke intensity was developed and used at Greyville, where the emission of smoke and grit is largely confined to railway engines. This showed that the times of greatest emission were 6 a.m. to 8 a.m. and 2 p.m. to 7 p.m., and this information was forwarded to the Railways to induce their attention.

Mr. Howson asked me to acknowledge with sincere appreciation the good co-operation he had received in all his contacts in the City of Durban, and I should like to place on record the assistance given by the City Health Department during the period Mr. Howson used the Gale Street offices.

Mr. Johnson is now carrying on from where Mr. Howson handed over, and representations are being made through the Municipal Service Commission and the Efficiency and Economy Committee to obtain the necessary inspectorate staff and stoking demonstrators to make further progress in this very important work."

IX NIGHTSOIL AND REFUSE DISPOSAL

These services are under the control of the City Engineer who has kindly supplied the following particulars:

"Conservancy: The number of pails in use during the year was 15,266.

Refuse Removal and Disposal: The quantity of refuse collected for disposal was 347,826 cubic yards.

Street Cleaning: Approximately 40,997 cubic yards of sweepings were collected and disposed of.

Dead Animals: 375 dead animals were removed and disposed of."

X. MILK SUPPLIES

It has been most encouraging during the year to note the progress that has been made by farmers towards the adoption of a more scientific outlook in the pursuit of their dairying operations. This is reflected in the outstanding advances which have been made in the standard of premises in Natal amongst the Department's registered dairy farmers. Even at quarterly meetings of farmers, officials and distributors, a scheme which was inaugurated in 1956, it was the farmer himself who now urged that the structural programme initiated by the Department should be rapidly brought to finality. Such an outlook of course enabled this Department to make rapid progress in this aspect of its work. The bacterial improvement in the quality of milk which resulted from the better standard of premises reached a

stage which appeared to be static, and it was clear that the possession of suitable premises alone did not necessarily ensure a higher bacterial standard of milk. Something more was indicated - it was also essential to instruct the farmer how to utilise the facilities available so as to attain a high standard of hygiene, without which a first class product is unobtainable. With this end in view an extensive educational programme was initiated during the year, in which the staging of health education film shows was a prominent feature. Such shows were held in all the major production areas.

As all the dairy films had been purchased in Britain and depicted British scenes, it was decided to produce one in which South African conditions were reflected. This film entitled "From Pastures to Pasteurisation" was almost finished by the end of the year.

In addition, supplies were regularly sampled throughout the year, and all consistently poor producers were warned that substandard supplies would be rejected. City distributors have also contributed materially to the success of the milk control scheme. City depots are all equipped with the most modern machinery and are well housed. Two of these concerns have introduced self-refrigerated pantechnicons for the carriage of bottled milk from the pasteurising depot to various zones of the City. The milk can be held there until loaded onto distribution handcarts without further handling. The bulk of Durban's milk supply is transported to the City in insulated tankers run by the largest distributing firm in the town.

Another large concern has installed a central laboratory bringing the number of private laboratories to three. This is further evidence of the acceptance of the fact that "clean milk is good business".

Cream is handled by four pasteurising depots. Here again plant and equipment have been modernised and efforts to encourage re-pasteurisation of cream already derived from pasteurised milk have met with general success. This procedure has led to a marked improvement in the keeping as well as the bacterial quality of this cream as is shown by the graph in this report.

(The poor results obtained during mid-October to December may be attributed to the installation of more substantial plant and equipment in three depots. Unfortunately this was accompanied by an exceptionally warm spell of weather - this however was temporary.)

Recognised bacterial standards for cream have not been laid down in this country. This Department therefore approached the South African Bureau of Standards with a request that this omission be rectified so that approved standards for cream could be included in the proposed revision of the current Milk (and Milk Products) By-laws. As a result of this approach meetings were held in Johannesburg under the direction of the Bureau of Standards and this Department was represented at all these meetings. The final form of these standards has now been unanimously approved by the Investigating Committee and such standards are already being applied in the City.

Besides the drafting of standards for cream the question of formulating acceptable standards and specifications for sterilised milk was also given consideration during the year. This was accomplished at a representative meeting convened by the Union Department of Health at Pretoria. This matter was of special interest to this Department as one of the most modern sterilising plants was about to be installed by a company within the area of its jurisdiction. The Veterinary Medical Officer attended

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the meeting in question and spoke on the various factors affecting the production and marketing of sterilised milk in Natal. Consequently it is believed that when the relevant regulations, which must of necessity be national in character, are promulgated, the standards prescribed will take into account the specific climatic and other special circumstances of this Province.

Source, Processing and Distribution of Milk Supplies

Seven "balancing" stations situated in Natal and three in East Griqualand are registered in terms of the Milk (and Milk Products) By-laws. Milk supplies are only accepted from registered farm/dairy premises at these various "balancing" stations, where they are filtered, cooled, and bulked prior to dispatch to Durban. This milk reaches the City's four pasteurising depots both by road and rail in cans and also by insulated stainless steel milk-tankers, which are filled at these "balancing" stations. After processing at the depots this milk is distributed throughout the City. In addition raw milk is distributed in the City by eight raw milk producer/distributors.

Nature of Supplies

Durban's daily intake of milk is approximately 34,227 gallons, of which approximately 33,450 gallons are pasteurised. Milk for pasteurisation is produced by 761 registered producers situated in Natal and East Griqualand. Approximately 500 gallons of milk are used daily for the manufacture of ice-cream.

Control

Control at the various stages of milk handling from producer to consumer is organised as follows:

Producers:
(1) Regular inspections, with particular attention to lay-out of premises, design, equipment, refrigeration, suitability of Bantu quarters, water supply and sanitation;
(2) Veterinary checking of animals;
(3) Laboratory tests of samples;
(4) Blood tests of milk-handlers; and
(5) Health education and propaganda by means of lectures and film shows.

Up-Country Balancing Stations:
(1) Regular inspection with attention to premises, equipment and labour; and
(2) Laboratory checking of samples.

Pasteurising Depots:
(1) Regular inspection of personnel, equipment and processing; and
(2) Regular laboratory tests including bacterial and chemical testing.

Distribution:
(1) Regular sampling of milk exposed for sale, either at the depot or in the course of distribution.

The following is a detailed record of the work carried out during the year.

Inspectional Programme

Dairy inspections carried out:	City	1,635	
Dairy inspections carried out:	Country	1,130	
	Total		2,765

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Initial farm dairy inspections	163
Country depot inspections	156
Personnel vi-tested and inoculated with T.Endotoxoid	1,235
Doubtful vi-tests	15
Positive vi-tests	4
Personal notices/letters to producers/distributors	426
Personal notices to remedy minor defects	37

Improvements and Progress

Among country producers remarkable structural progress has been maintained. The shortage of cement which curtailed structural improvements during the previous year has been overcome and a plentiful supply during the current year has enabled farmers to make good headway in complying with Departmental requirements. In Natal an additional 94 new cow sheds, 131 new milk rooms and 133 wash rooms have been completed and brought into use. The nett effect of all these improvements on the general structural standard achieved in Natal is reflected in the table below:

No.	of	premises	91-100%	complete	structurally	34
"	"	"	81-90%	"	"	85
"	"	"	71-80%	"	"	112
"	"	"	61-70%	"	"	126
"	"	"	51-60%	"	"	69
"	"	"	below 50%	"	"	130
					Total	556

Eleven producers were refused registration due to the poor standard of their promises; forty-four producers have voluntarily gone out of production and fifty new producers have been registered.

Laboratory Programme

The work done in the laboratories can be summarised as follows:

(a) City Health Department:

Bacterial Counts (breed smears)	7,054
Presumptive B.coli tests	1,200
Eijkmann tests (faecal b.coli)	174
Phosphatase tests	1,514
Methylene blue tests	711
Plate counts	407
Acidity tests	349
Mastitis tests	11,375
Contagious abortion "ring-tests"	2,609
Sediment tests	5,471
Butterfat tests	27

(b) Municipal Pathologist

B. coli tests (presumptive) and Eijkmann	157

(c) Union Health Department

Tuberculosis: Biological tests	60

(d) Government Chemical Laboratory, Johannesburg

Milk: Butter-fat analyses (Food, Drugs and Disinfectants Act)	185
Ice-cream analyses (Food, Drugs and Disinfectants Act)	6
Cream: Butter-fat analyses (Food, Drugs and Disinfectants Act)	4

In connection with these figures it will be of interest to quote some of the results obtained during the year at various stages of the milk process.

(a) Pasteurised Milk (Bottled)

Breed clump counts: samples examined	326
Samples showing less than 200,000 organisms per c.c.	63%
Plate counts: samples examined	139
Samples passed	89%
Acidity: samples examined	117
Samples passed (.18%)	95%
Pasteurising efficiency (phosphatase): samples tested	526
Samples satisfactory	100%
B. coli tests: samples tested	230
Samples satisfactory	72%

(b) Pasteurised Milk (Cans)

Breed clump counts: samples examined	147
Samples showing less than 200,000 organisms per c.c.	57%
B.coli tests: samples tested	147
Samples satisfactory	74%

(c) Raw Milk

Breed clump counts: samples examined	449
Samples showing less than 200,000 organisms per c.c.	95%
Plate counts: samples examined	245
Samples passed	92%
Acidity: samples examined	197
Samples passed (.18%)	89%
Keeping quality (Methylene blue tests): samples examined	348
Samples "good" (over 4 hours)	83%
B. coli tests: samples examined	352
Samples satisfactory	77%

(d) Producer (Farm) Milk

Breed clump counts on arrival in Durban: samples exained	5,468
Samples showing less than 200,000 organisms per c.c.	55%

Visible dirt sediment tests

Year	Samples tested	Percentage sub-standard
1951/2	4,352	45.3
1952/3	6,273	24.0
1953/4	4,326	18.0
1955	4,233	20.0
1956	5,468	13.0

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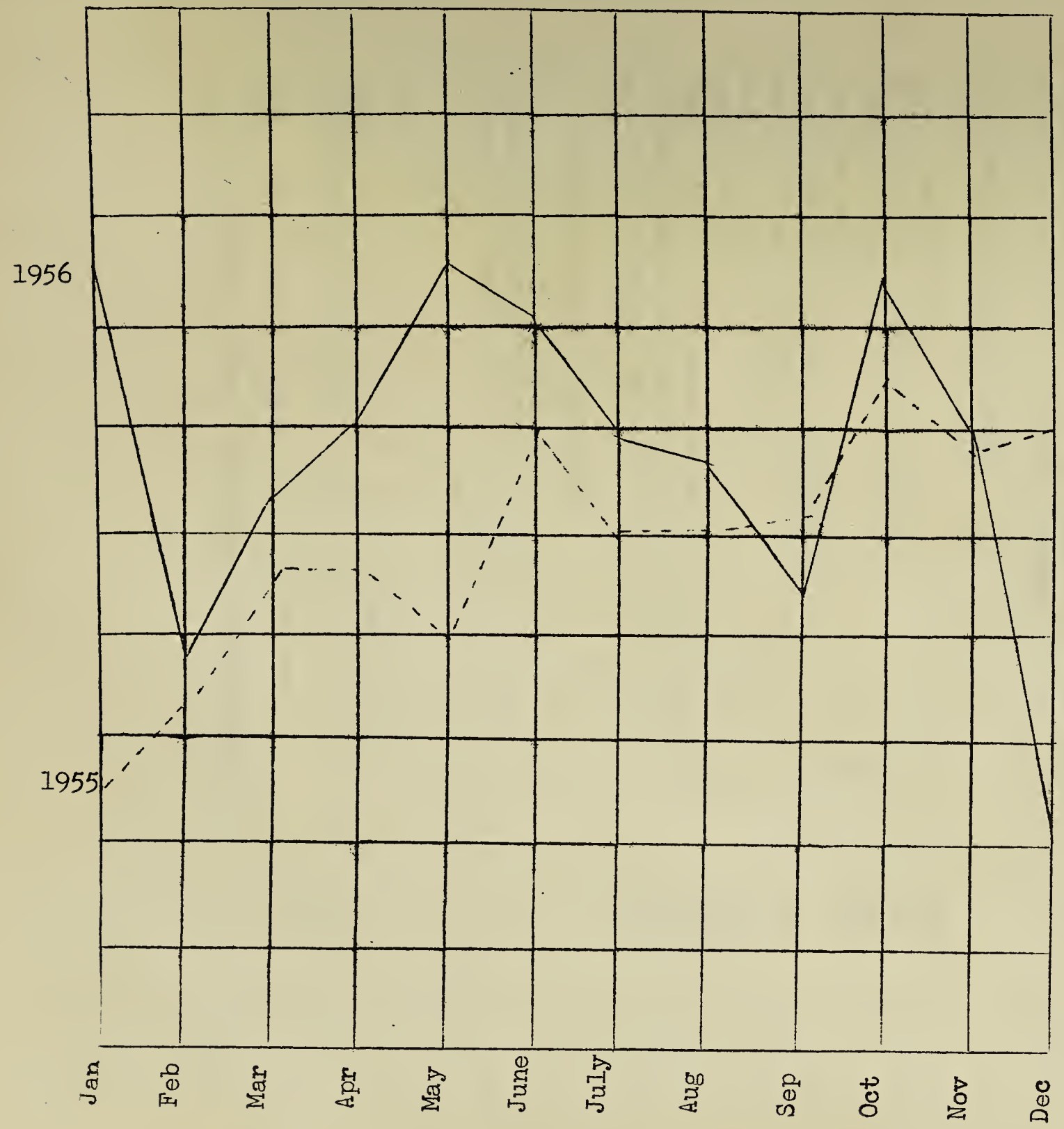
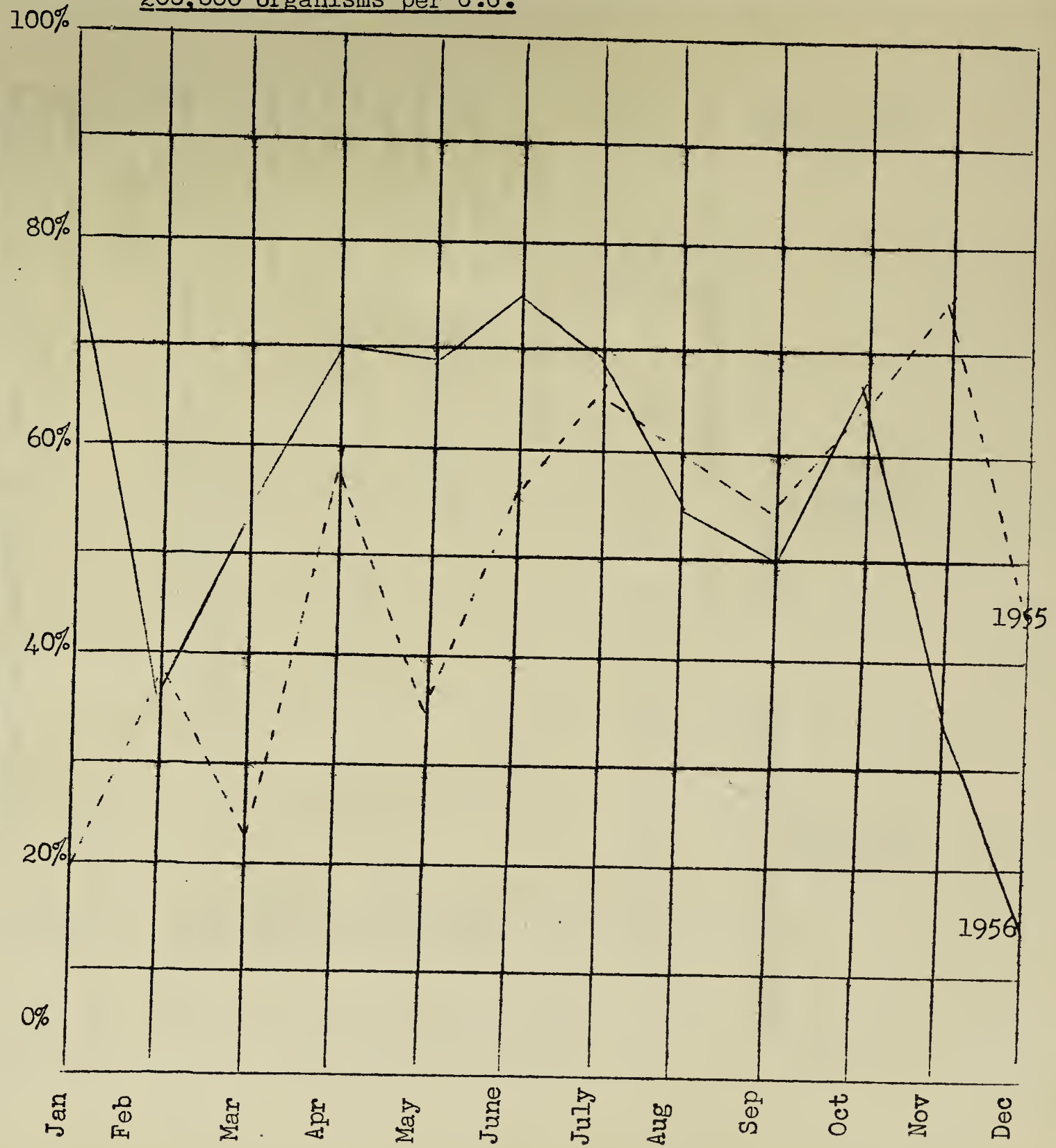
"A" Percentage of Samples Free from B. Col I



"B" Percentage of Samples showing less than 200,000 organisms per C.C.



(f) Ice-cream

Breed clump counts: samples examined	140
Samples showing less than 200,000 organisms per c.c.	84%
B. coli tests: samples examined	140
Samples satisfactory	42%
Pasteurising Efficiency: samples tested	140
Samples satisfactory	100%

Veterinary

Tuberculosis: Regular clinical examination in all cows in "A" class herds was carried out with the object of detecting tuberculosis in the early stages. Tuberculosis testing of herds is encouraged. This testing is done occasionally by this Department on request, as part of the Government Interim Scheme. Of 60 samples of milk submitted for biological test, one was found to be positive. Milk from this herd was pasteurised until the positive animals were detected by tuberculin testing and removed.

Mastitis: The response of farmers to the health educational programme which has been promoted by means of pamphlets and lectures has been gratifying. A total of 5,468 routine tests were conducted and 16% of herds were found to be positive. The farmers concerned were notified and circulars were forwarded explaining the dangers of this disease. As a result a further 4,832 tests were conducted at farmers' requests and treatment advised. In addition producer/distributors' herds were regularly tested and in this connection a further 1,226 tests were conducted.

Brucellosis: An intensive drive was conducted against this disease. This campaign was aided by health education films being shown in the major farming areas, as well as pamphlets and personal visits to infected farms. As a result the disease is practically non-existent in registered producers' herds. In 1955, of 1,529 herd tests conducted 3% were found to be infected. In 1956, of 1,988 herd tests conducted, this figure had decreased to 0.3%, with every prospect that the disease would soon be eliminated from registered herds.

Miscellaneous: In addition to the seasonal appearance of anaplasmosis, "three-day stiff sickness" and babesiosis,the daily milk yield was considerably affected by extensive outbreaks of 'lumpy skin' disease. A steady but alarming increase in bovine sterility was also evident. This observation is borne out by a Government survey conducted on herds in both Northern and Southern Natal which has revealed that the fertility rate had dropped to the alarming figure of 47% and the probability is that in dairy herds this figure will be even lower. The resultant decrease in the number of calves born has already led to a considerable increase in prices for replacement of dairy stock, and unless serious efforts are made, on a national level, to control these diseases milk production will shortly fall far short of estimated future demands.

XI. MEAT SUPPLIES

(By courtesy of the Director of the Municipal Abattoir and Chief Veterinary Officer)

"Slaughterhouses: Two establishments are situated in Durban, viz. (i) the Municipal Abattoir, operated by the local authority, and (ii) the Federated S.A.Meat Industries Ltd., Maydon Wharf. This latter has not functioned for slaughtering during the year.

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System of Slaughtering: The methods used are governed by the Humane Slaughter of Animals Act. No. 26 of 1934. Bovines are stunned by means of humane killers of the captive bolt type. Cattle for Jewish and Mohammedan consumption are slaughtered by means of throat cutting in accordance with the religious beliefs of these sections of the community. In all cases, races and stunning and casting pens of approved types are used.

Pigs are slaughtered by means of electrically operated stunners. Sheep and goats are slaughtered exclusively by throat cutting.

Meat Inspection: Animals and carcases etc., are inspected in accordance with the Regulations published under the Public Health Act No. 36 of 1919.

Disposal of Waste Products: Condemned meat and offals, and the blood of slaughtered animals, are converted into valuable farm foods for which there is a ready sale. Tallow is also produced, which is sold by tender to soap manufacturers. The by-product plant has been completely modernised.

Pig bristles are collected and sold for brush making and upholstery, and the skins of unborn calves are sold to Natives.

A firm of pharmaceutical chemists collects endocrine glands, spinal cords, ox gall, pig and calf stomachs, etc. for manufacturing purposes. Manure and paunch contents are taken over by the City Engineer and used in the manufacture of compost.

Cold Storage: Refrigeration accommodation totalling 170,000 cubic feet is available for storing butchers' requirements, and surplus stocks during glut periods.

Export: Several consignments of porkers have been exported to Great Britain during the year and a quantity of beef carcases to the Belgian Congo. This is part of the functions of the Meat Control Board.

Butchers' Shops: The City Health Department exercises supervision over these premises throughout the City. Meat exposed for sale must have been inspected, passed and stamped as fit for human consumption at the Municipal Abattoir. The Livestock and Meat Industries Control Board is responsible for the distribution of pork supplies to the retail trade, and mutton, beef and veal are sold by auction each day.

Condemnations: A summary of animals slaughtered and meat condemned follows:

	Bovines	Calves	Swine	Goats	Sheep
Slaughtered	58,419	1,264	32,591	39,989	359,574
Whole carcases condemned	883	115	1,104	502	1,331
Portions of carcases condemned in lbs.	433,906	336	772,203	15,566	772,203

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XII. CHEMICAL ANALYSIS OF FOODSTUFFS

The following foodstuffs were submitted to the Government Chemical Laboratory, Johannesburg and the City Analysts under the provisions of the Foods, Drugs and Disinfectants Act:

Samples		Not in conformity with Regulations	Action Taken	Result of Action	Remarks
Nature of	No.				
Boerewors	15				
Bread, White	73				
Chutney	4				
Coffee, Mixed	7				
Cordial, Raspberry	1				
Cream	6				
Curry Powder	34				
Dripping	2				
Fat, Cooking	2				
Fat, Vegetable	4				
Flour, Bread	12				
Flour, Cake	7				
Flour, Mealie	3				
Honey	8				
Ice-cream	6				
Lard	2				
Margarine	1				
Mayonnaise	2				
Mealie Meal	1				
Milk	180	2	Prosecution	A.G. £5	
			"	A.G. £10	
Minced Meat	67	7	Prosecution	A.G. £5	
			"	A.G. £10	
			"	A.G. £5	In one case accused died before date of hearing
			"	A.G. £10	
			"	Fine £7.10.	
			"	A.G. £5	
			"	A.G. £5	
Oil, Cooking	5				
Oil, Maize	1				
Pepper, Black	3				
Pepper, White	6				
Sausage, Pork	2				
Syrup, Synthetic (Raspberry)	1				
Rice	3	1			Declared unfit for human consumption
Oil, Salad	1				
Salt, Cooking	9				
Sausages	32	3	Prosecution	A.G. £5	
				A.G. £5	In one case accused died before date of hearing
Squash, Fruit	1				
Squash, Orange	2				

Samples		Not in conformity with Regulations	Action Taken	Result of Action	Remarks
Nature of	No.				
Squash, Fruit	1				
Squash, Orange	2				
Stew	1				
Cordial, Strawberry (Synthetic)	1				
Sugar, Brown	2				
Syrup, Fruit	1				
Tea	4				
Water	12				
Total	524	13		£72.10. 0.	

Bacteriological Examination of Foodstuffs

The following foodstuffs were submitted for bacteriological examinations:

Corned beef sandwich	1
Milk	1
Cream-filled doughnuts	1
Cream-filled confectionery	12
Fish cakes	3
Frozen Cooked crayfish tails	1 pkt.
Frozen fish	1 pkt
Fish sticks	6 boxes
Meat and potato	1 portion

Satisfactory reports were received in respect of the above.

XIII WATER SUPPLY

(By courtesy of the City Engineer)

"(a) Source of Supply:

Durban's water supply is derived from the Umlaas and the Umgeni Rivers.

The Umlaas River provides water for the Shongweni Water Scheme which, once augmentation is completed in the very near future, will have a total capacity of fifty million gallons per day.

(b) Treatment of Water:

Water from both rivers is stored in open reservoirs and then gravitated by means of pipe lines to the various purification works. Here the water is clarified by means of slow sand and rapid gravity filters, chlorinated by chlorine gas and stored in covered balancing reservoirs, before being passed through steel aqueducts to the distribution system in the City.

(c) Distribution:

The water is distributed to consumers by means of a system of totally enclosed reinforced concrete service reservoirs, and a network of steel, cast iron, spun iron and asbestos cement, pressure piping.

From the time of filtration the water is not exposed to the elements again until it is drawn from the system by consumers.

(d) Consumption:

Durban's average daily consumption during the year ending 31st December, 1956, was 36,903,564 gallons, during which period the highest recorded consumption on any day was 45,115,100 gallons.

(e) Purity:

Every precaution is taken to ensure that Durban's water supply is maintained at the highest possible state of purity. A staff of chemists and bacteriologists is continuously employed on the chemical and bacteriological examination during all phases of the water's treatment and distribution. An average of 1,200 samples, taken from various points of the City, are examined bacteriologically each year and the results reveal a high state of purity, throughout the entire distribution system. Independent and regular examinations are made by the Government Pathologist."

XIV. FIELD HYGIENE

(a) Plague: Rodent Control:

Durban, as the first port of call in South Africa for shipping plying between the endemic plague spots of the East and the Union, occupies a perculiarly vulnerable position from the aspect of sea-borne plague infection. To that hazard must also be added the ever present possibility that plague infected rodents may be brought into Durban in grain or other rat attractive material consigned from areas in the Orange Free State and Transvaal where the disease may be smouldering.

Although it is now well over forty years since plague last broke out in Durban, this fact must never be allowed to lead those responsible for safeguarding the public health of this City into a complacent attitude.

Durban is to-day one of the most important shipping and strategic centres in the Southern Hemisphere. As such, it is imperative that anti-plague precautions be vigorously and constantly applied. If, despite the plague control measures undertaken by the Port Health Department and this Department, plague was inadvertently introduced into the City, it needs little or no imagination to appreciate how seriously the mercantile and maritime interests would be affected. From the business viewpoint, the result could be almost disastrous and the reputation of the City as the premier Union holiday resort would vanish over-night.

Geographically, plague control in Durban is vested in three authorities which work in close liaison: viz.

(i) The Union Department of Health which, through the Port Health Department, controls shipping and the dock areas;
(ii) The City Council which is responsible for all premises in the Municipal area which are not occupied by State and Provincial Departments and the South African Railways administration; and
(iii) The Railway Administration which is responsible for railway and harbour properties.

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The Department has given serious consideration to the need for improving its plague control organisation which has not, from the personnel viewpoint, kept abreast of the tremendous expansion of the City in the post War period. In this connection, the City Council on the recommendation of this Department, authorised the Deputy Chief Health Inspect to visit Johannesburg for a period of one week during May, 1956, for the purpose of studying plague control organisation and techniques in that cen His report confirmed that:

(a) The anti-plague organisation of this City was due for review and ther was an urgent need for expansion of Departmental activities, both in regard to permanent and palliative control measures; and
(b) The complement of staff allocated to full-time rodent control has not kept pace with the growth of the City.

Consideration is now being given to the best means of implementing the Deputy Chief Health Inspector's recommendations.

Closure of the Suez Canal resulted in a marked increa in the volume of shipping using Durban harbour. Regular liaison was maintained with the Port Health authorities and routine index trapping, gassin and poisoning operations were undertaken in the Municipal area and a close check maintained generally on the rodent position.

Apart from routine inspection of premises undertaken the Health Inspectorate, the Department has a special rodent control staff comprising 5 European General Assistants (1st Grade) and 5 trained Indian Field Assistants who are employed full-time on anti-rodent duties. Set out hereunder is a statement of the work carried out by the rodent control team:

No. of Inspections	Traps set		Baits: Poisoned		Rodents Destroyed		Laboratory examinatio Specimens
	Harbour Vicinity	General	Harbour Vicinity	General	Harbour Vicinity	General	
14,347	14,630	19,002	7,700	698¾ lbs.	1.136	4,128	293

In addition to the foregoing, 210 complaints of roden prevalence on private properties were investigated by the District Health Inspectional staff whilst numerous premises were inspected prior to demolition for the purpose of ensuring that they had been rendered rodent-free.

(b) Mosquito Control:

The sub-tropical climate of Durban is particularly favourable for mosquito development. Heavy rainfall, high summer temperatures and lush growth of vegetation combine to render mosquito control a very difficult problem.

Mosquito control is mainly concerned with two types o conditions namely (i) stagnant water retained in discarded tins, bottles, old motor tyres and other water holding receptacles and (ii) natural collections of water in the form of puddles and swamps.

Whilst most varieties of mosquito found in Durban are of no public health significance, the nuisance aspect resulting in loss of sleep and irritation can be very great indeed. In the circumstances, it i the policy of the Department to eradicate all mosquito breeding, irrespecti of the disease carrying potential.

MOSQUITO CONTROL: HIGH PRESSURE PUMP SPRAYS LARVICIDE OVER BLUFF SWAMPS.

SMOG: THIS ENGINE IS BUT ONE OF THE MANY SOURCES OF AIR POLLUTION.

Little difficulty is found in controlling development discovered on occupied premises. By contrast, mosquito control in the Bluff swamp areas presents unusual and formidable obstacles.

Bluff Swamps: The seaward and inner ridges of the Bluff are separated by a wide and low-lying valley which it is thought, in bygone times, formed the bed of the Umlaas River with an outlet into Durban Bay. As a result of natural changes, the river course was diverted to discharge into the ocean at Isipingo and, in the course of time, some parts of the valley floor were raised by natural processes, whilst other portions retained their former levels to form extensive swampy depressions. Until the recent rapid and close residential development of the adjacent high-lying land, mosquito breeding in the swamps caused no concern. Concurrently with the opening up of these residential localities there has been a marked enlargement of the inundated areas latterly due possibly to the discharge of storm water into the main swamps.

During the year the Department devoted much of its energies to mosquito control at these swamps, of which the two principal ones are located on Municipally-owned land, while a third and much smaller one is in multiple private ownership. Owing to the large expanse of the swamps, 97 acres in the case of Van Riebeeck Park and approximately 30 acres at Tara Road, it early became evident that the usual manual application of insecticide could not be expected to cope satisfactorily with the position by reason of the time factor and inability to reach all water surfaces. It was apparent that control measures would require to be organised in two phases, (i) palliative, involving the wide-spread and regular application of insecticides and (ii) permanent works, comprising drainage and reclamation of the swamps.

Additional health inspectional and works personnel were posted to full-time duty on mosquito control at the swamps and vicinity.

Following upon inspections by the Public Health and Works Committees of the City Council, it was decided to utilise aircraft for the application of insecticide at appropriate intervals, supplemented by manual control of localised perimeter breeding. In addition essential funds (£47,000) were voted by the City Council for the construction of a drainage tunnel through the seaward ridge and other essential works which, together with subsequent reclamation, should finally eliminate the unsatisfactory conditions.

Bayhead Reclamation: Several occurrences of severe mosquito nuisance at premises in Grosvenor, King's Rest and Marlborough Park were found to have their origin in collections of stagnant and untreated water in the Indian market gardens and reclamation works on South African Railways land at the Bayhead.

Upon the attention of the Railway health authorities being drawn to the nuisance immediate remedial measures were put in hand. Close liaison with the Railway health authorities has been established with a view to obviating future mosquito breeding in this area.

Aedes Control: Routine anti-aedes mosquito control measures were maintained throughout the year in the Municipal area adjacent to the Louis Botha National Airport.

One European General Assistant (2nd Grade) together with six Bantu labourers are engaged full-time on ditching and spraying operations while two Bantu Health Assistants are constantly employed on

mosquito surveys and health education of non-European householders. House-to-house inspections are carried out at appropriate intervals and joint inspections with the Government Health Inspector were carried out.

General: During the year 467 complaints of mosquito nuisance, of which 128 were attributed to the Bluff swamps, were investigated and the necessary action taken.

A new power spray pump with a range of approximately 60 feet was purchased for mosquito control work, particularly at the Bluff. The accompanying photograph of this machine under working conditions gives some idea of its capabilities.

(c) Cockroaches

Anti-cockroach measures by the Department have, in the main, been confined to the spraying of sewers, storm water drains, gutter bridges and other harbourages on Municipal property with DDT/BHC residual spray, with good results. A gang of Indians under European supervision is employed and the following figures indicate the scope of activities.

Manholes Sprayed		Gutter bridges etc.	Insecticide Used.
Sewer	Stormwater		
14,600	2,311	17,652	1,057 gallons

(d) Flies:

The number of complaints (197) of fly nuisances received by the Department was very low. Necessary investigations and remedial action was taken in all instances.

On the suggestion of this Department the City Engineer is now using improved methods and more efficient insecticides for fly control on Municipal refuse tips with very satisfactory results.

(e) Vacant Land:

Rank overgrowth on 500 acres of vacant land was cleared by the Department for the purpose of eliminating health nuisances. The cost of this work was charged to the property owners concerned.

XV. LEGISLATION

(a) Offensive Trade Regulations:

The Offensive Trade Regulations for the City of Durban (G.N. 2014 of 1921 as amended) were further amended by Government Notice No. 2179 dated 23rd November, 1956. The main effects of the amendments were as follows:

(i) The addition of the following trades to the list of controlled trades -
Lead smelting works;
Oil refineries and works dealing with the processing of products of petroleum refining;
Paint and varnish works;
Asbestos works;
Cement works;
Metallurgical works, reduction works and ore-dressing works.

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(ii) The delegation of powers to the Medical Officer of Health to decide all future applications, subject to the right of appeal, by an applicant or objector, to the Council against any decision by the Medical Officer of Health;

(iii) Applicants must themselves in future advertise their intention to erect, extend, alter or add to any building, plant or works in connection with an offensive trade, whereas previously advertisements were arranged by the local authority.

(b) Methyl Bromide Fumigation:

Methyl bromide has been used for some time in Durban as a fumigant but its use had been confined to a fumigating chamber. During the year under review, however, there was a revolutionary development whereby a local firm carried out an experimental fumigation of a dwelling house for the control of wood-destroying insects. The whole building was covered with plastic sheeting and the methyl bromide fumigant was introduced and left for a period of 36 hours. This experiment was undertaken in collaboration with the Government Timber Regulations Officer, and City Health Department observers were present at intervals during the process.

The Department had, during the previous year, represented to the Union Health Department the need for legislation to control this method of fumigation as the existing Hydrogen Cyanide Fumigation Regulations had no application to methyl bromide. Following the aforesaid experiment which was considered likely to be the forerunner of many similar fumigations, and because of the extremely toxic nature of this gas the matter was again represented to the Government with a view to the introduction of some form of controlling legislation.

The Secretary for Health advised in September that the promulgation of regulations for the control of fumigation by methyl bromide was not contemplated, but in view of the fact that fumigations of dwellings are now being undertaken locally following the success of the experiment referred to above, the need for legislative control is again being taken up with the Government.

(c) Prosecutions:

During the year 206 cases were brought to Court for contraventions of various public health legal codes, with the following results:

Public Health By-laws	No. of Contraventions	Guilty	Not Guilty	Fines
(a) Relating to Nuisances				
Unclean premises (yard areas, drains, privies, etc.)	38	38		219. 0. 0.
Fly development	13	13		44.10. 0.
Defective drainage appurtenances	8	8		40. 0. 0.
Structural defects	33	33		194. 0. 0.
Poultry nuisance	1	1		3. 0. 0.
Mosquito development	2	2		10. 0. 0.
Urinating in unauthorised places	1	1		1. 0. 0.
Bug infestation	1	1		25. 0. 0.
Refuse deposited in street	1	1		10. 0. 0.
Absence of refuse receptacle	1	1		3. 0. 0.

Public Health By-laws	No. of Contra-ven-tions	Guilty	Not Guilty	Fines
(b) Food				
Unclean conditions	53	53		360. 0. 0.
Structural defects	4	4		18. 0. 0.
Exposure to contamination	34	33	1	152.10. 0.
Unsound food	5	5		27.10. 0.
Keeping of clothing in food preparation room	11	11		40. 0. 0.
Absence of/dirty/protective clothing	28	28		94. 0. 0.
Improperly wrapped foodstuffs	4	4		15. 0. 0.
Unclean/defective equipment, crockery, etc.	15	15		60.10. 0.
Absence of/unsound refuse receptacle	3	3		7.10. 0.
Unapproved vehicle	2	2		10. 0. 0.
Lack of dustproof ceilings	1	1		5. 0. 0.
Absence of clean towel, soap and nail brushes	3	3		7.10. 0.
Premises not vermin proofed	1	1		5. 0. 0.
Failure to paint premises	1	1		5. 0. 0.
Absence of paved area for refuse receptacles	1	1		2.10. 0.
Food conveyed open to contamination	3	3		17.10. 0.
(c) Relating to Privies and Cess Pools				
Use of privies where sewer is available	8	8		32. 0. 0.
Absence of/disrepair of sanitary accommodation	11	11		62.10. 0.
(d) Milk (and Milk Products)				
Milk below bacterial standard	5	5		35. 0. 0.
Failure to register	4	4		12.10. 0.
(e) Relating to Dry-Cleaners' and Dyers' Establishments, Laundries and Depots				
Unclean conditions	12	12		55. 0. 0.
Dirty articles in contact with clean	3	3		25. 0. 0.
Failure to paint premises	2	2		5. 0. 0.
Structural defects	2	2		5. 0. 0.
Premises not connected to Municipal sewer	1	1		5. 0. 0.
(f) Animals				
Non-registration/unauthorised animal keeping	3	3		11. 0. 0.

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Regulations	No. of Contra-ven-tions	Guilty	Not Guilty	Fines
(a) Regulations for the Control and Inspection of Premises in Defined Zones				
Non-registration	4	4		26. 0. 0.
Unclean conditions of premises	3	3		43. 0. 0.
Structural defects	4	4		34. 0. 0.
Failure to paint premises	1	1		5. 0. 0.
(b) Food, Drugs and Disinfectants Act				
Sale of food below chemical standard	3	3		20. 0. 0.
Sale of minced meat containing preservative	11	11		67.10. 0.
Sausages containing excess preservative	1	1		10. 0. 0.
(c) Regulations for the Prevention of Malaria and Other Mosquito-borne Diseases				
Mosquito breeding conditions	4	4		20. 0. 0.
(d) Regulations Regarding the Prevention of Rodent Infestation of Buildings and Premises in Urban Areas				
Measures for the Elimination of rodent ingress	1	1		2.10. 0.
Cover for rodents	1	1		5. 0. 0.
(e) Hydrogen Cyanide Fumigation Regulations				
Absence of danger notices	1	1		15. 0. 0.
Lack of first aid appliances	1	1		15. 0. 0.
Acts				
(a) Public Health Act No. 36 of 1919 (as amended)				
Failure to give access to premises	1		1	-
Unsound foodstuffs	1	1		5. 0. 0.
Building By-laws				
Sleeping in Laundry	7	7		11. 0. 0.
Occupation of sub-floor area	1	1		5. 0. 0.
	364	362	2	£1920.10. 0.

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XVI HEALTH EDUCATION

NOTE: The following report was written by the Health Educator. Whilst its style of presentation does not follow the usual conventional pattern, it vividly portrays the work of the Section during 1956. It has been included in the Annual Report just as it was written in the conviction that readers will agree that it paints a picture more colourful than a mere recital of facts, figures and statistics. C.M.O.H.

Retrospect - Has it Been Worth While?

It was the end of the year. We stood on a hill-top, the Bantu Lecturer and I. Around us for miles, over hill and valley, sprawled jerry-built Bantu shacks. On an adjacent hill neat rows of white cottages belonging to a Municipal scheme housed more fortunate Bantu. These two areas occupied by thousands of Bantu were part of our 'parish'. One might well have said a problem part. In it we had toiled on foot as well as in daylight cinema van; we had used the media of films, exhibit pieces, demonstrations, loudspeaker and group talks to bring to those people knowledge of a better way of life.

Standing there we recalled the commencement of the work thirteen years ago. How easily, we remarked, when we were still novitiates, we would have defined health education! - what was it but teaching on health? Now we would hesitate to label it with such perilous ease, for the term is not wholly represented by the figure of a teacher and class, although it has hints of such a figure; it certainly involves building a bridge of friendship between the evangeliser and the people - that bridge is vitally important: it also means going amongst the people where they work, where they live, where they enjoy social amenities and where also they indulge in anti-social activities and behaviour, and in all those places to observe their needs, prejudices and pre-dispositions in order to return later with practical suggestions for improving their way of living - and the word 'practical' must be heavily underscored. There is, in addition, an unwelcome but imperious meaning in 'health education' buried too deep for the casual observer to suspect, and that is the application in daily life of that onerous practice of self-discipline. Perhaps, more than anything else, the Bantu lacks self-discipline. Mothers postpone taking sick babes early to clinic because <u>today</u> they can't be bothered and there is always <u>tomorrow</u> e.g. "the cow gives milk tomorrow"; but by tomorrow it may be dangerously late. What is that but undiscipline which leads a mother contentedly to brew in preference to going to the mobile unit which is standing by offering immunisation against diphtheria? And what of illegitimate innocents with gentle, dark velvety eyes heartbreakingly unaware that they are abandoned by their mothers and that their fathers are unknown? It is not uncommon to find three or four children, left to the dubious care of a neighbour or granny while the mother works or absconds, and the various fathers are unknown: who could deny that self-discipline is wanting in such cases? At this crucial point, to complete the arc of health education, a directive must be given pointing to man's trinity of being - body, mind and soul, and that no one can do violence to one without affecting the whole.

Widened Horizons

As we left the scene on the hill I said to the Lecturer "do you feel that we have widened the horizons of these people and helped them on the first stages of a new pattern of life? Do you agree that we have not faltered in zeal or faithfulness, that we have identified ourselves

with their problems in order to understand them fully and be able to show them a way of solution? Do you agree?" "Why" he replied, "I'm surprised you even ask". Then waxing eloquent, as only a Bantu can, he said "YOU KNOW there are babies here living and healthy that would have been dead of gastro-enteritis, had we not constantly pleaded with parent, at the first onset of sickness, especially in the summer months, to hurry to the clinic and not to linger while vaguely hoping the child will recover; hau! what of all the babies immunised against diphtheria because we have patiently exhorted the mothers about this child-snatching disease? Others have dodged the demon T.B. because of our films. There are happy parents with healthy children, who formerly were childless, because we have uncovered the meaning of V.D. in its relation to family life. There are children who suffered from malnutrition, even to the gingery hair, and the parents were proud of the gingery hair not knowing its implication; did we not enlighten them? And what about this latest new thing on our programme, polio? Au! I could still be here at sunset telling these stories", he said. I smiled as he stopped; I knew it all; but, and this was the biggest but of all, did the Bantu themselves think as we did about our work? Did THEY value health education services? Was it really worth while? So often I had thus been challenged by visiting medical and other interested Europeans. Well, there was a way of answering that question and that was by putting ourselves at the judgement bar of these people and allowing them to pass sentence.

Out of the Mouths of the Bantu

Accordingly, one blistering morning, the daylight cinema affectionately called 'MboMbo' by the Bantu, started on its strange pilgrimage to ascertain its own place in the life of the people. It visited, day after day, shack areas, housing schemes, factories etc. People were astonished at the strange announcement over the loudspeaker: "people of the Zulus and other Bantu, today we have not come to teach or instruct; we have another idea; we think perhaps other people elsewhere should now have the MboMbo; we even wonder if the many things we tell you are like sweet songs in your ears but make no difference to your habits; if so we are wasting our time". Immediately from houses, shacks, factories, according to the venue, people literally swarmed to the van, the air a babel of clamant voices giving reasons why the MboMbo could not basely desert them. Below are given stories, culled at random, but repeated with infinite variety everywhere, which the Bantu considered vital reasons for continuing to health instruct them. Because nutrition, in our experience, has been the most "thorny" subject to persuade them about, excerpts on nutrition predominate hereunder:

Nutrition

Factory Man:

"Since seeing your nutrition film I've come to believe that feeding myself properly is necessary because I now know, what formerly I didn't, that daily my strength is used up and must be daily replenished with the right food; I now know which are the right foods and that I used to feed wrongly; some of these fellows are fools and laugh at me while they save money and starve or spend it on drink; but when they are drunk and hit someone's pig then pay heavy fines I laugh at them!"

Bantu Mother in Shacks:

"You can't take the MboMbo away from us! Look at my lovely child; changed from a poor sick creature because I learned from your film how to feed the child; especially I learned about skimmed milk which so agrees with the stomach - and yellow and green vegetables."

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Bantu Market Stall Holder:

"Since I learned from you about the food value of beans I have made a lot of money! I cook dried beans and serve portions cold, wrapped in paper, which the Bantu call bean sandwiches. All day long there is a waiting queue."

Bantu Teacher Observes:

"Your film on nutrition has taught the Bantu to change their habits of marketing. Formerly women went to buy three items only - potatoes, onions and tomatoes. Now you see them with green and yellow vegetables in their baskets; you can also see them discarding a white cabbage for a dark green one as if seasoned buyers!"

(N.B. Lecturers also conduct "buying" sessions at markets).

Bantu Eating House: Owner:

"When first you came to talk on food I was ready to tell you we couldn't afford Europeans' foods, but when you said the foods the Bantu like are good I listened. Since then I daily buy cheap cuts such as offal, liver, tripe and also cook beans. As for the enriched bread - it has 'got right into me' ... you no longer see white bread taking up useless space on my tables!".

Tuberculosis

Asiatic Barracks: Story of Three Men:

"The way you told us over the loudspeaker about X-Ray and going early to clinic took away all our fears; because we were early cases you said we need not dread hospitalisation; you made hospitalisation sound so friendly that we would not have been scared anyway. We thank you - we are all now cured."

Bantu. Tenant Housing Scheme:

"I listened to and saw your picture on T.B. I had been sick some time. Had consulted inyangas (medicine men) and a local hospital; I had taken all the medicine prescribed but no one had discovered the nature of my illness. When you showed the symptom of T.B. on the screen, such as night sweats, I knew THAT was MY sickness. I took your advice, went to hospital and came out well with the knowledge of handicraft as well."

V.D.

A Bantu Grannie Speaks: Shack Dweller:

"Over the hills from far away came the sound of MboMbo that winter's day I shall never forget. The words were "if you have miscarriages or your children stillborn, you may be suffering from V.D. Go to such and such a clinic and have a blood test and that will tell you if the cause of your childlessness is due to V.D. I hurried her to that clinic - she has now two healthy children. I thank you MboMbo."

Bilharzia

Asiatic:

At a school 450 children and 200 mothers stood watching a film on the daylight cinema van. Mothers crowded round and said "through

POLIOMYELITIS IMMUNIZATION FROM MOBILE CLINIC.
NOTE BROADCAST VAN AT LEFT.

A SELLER OF IMIFINO. (UDED BY THE BANTU TO PROVIDE HERBAL SPINACH). THE DEPARTMENT ENCOURAGES THE USE OF THIS VALUABLE DIETARY SUPPLEMENT.

you we have learned a new thing - that diseases hide in rivers, rivers which are the playgrounds of all Indian children". Many of them called their sons to the Lecturer to report "red urine". All sufferers were referred to the Principal for treatment at clinic. Said the mothers, "our children are even luckier than we, because through your moving van they learn, early in life, how to prevent disease."

The Lecturers were themselves astonished and often deeply moved by the tributes paid to their work - it was a rewarding and enriching experience for us all.

Group Work

It has been remarked in former reports that the daylight cinema van, invaluable as it is, is not the only answer to successful work. True, the Lecturer in the van has the prestige of a visible 'background of authority': the discussions which are always held after a film or loudspeaker talk are productive of many a new angle of approach, but the work on foot offers an opportunity of getting down to the domestic and environmental problems of the people where they live and coming to grips with them there.

"Your Brother's Keeper"

A campaign on immunisation against diphtheria amongst the Bantu, was a unique example of a different class of group work. It had been noted that in spite of teaching by broadcast talks over the mobile loudspeaker, and by group lectures over a protracted period, there were still numbers of infants not immunised. In certain shack areas much of the negligence was due to (a) lethargy (b) indifference and (c) illegitimacy rather than to ignorance. Where infants not immunised were discovered by Lecturers, the Bantu mothers frequently and quite casually acknowledged that they understood about diphtheria - that

(i) it is a most dangerous disease which attacks the throats of infants and often causes death;
(ii) the affected throat and swollen neck glands cause the infant much suffering, but
(iii) that none of these things need be because there is a protection against the disease by means of a free injection given at clinics.

With only two Bantu Lecturers available for work on diphtheria to cover a population of 175,880, it was obvious that a technique must be evolved which would infiltrate their daily lives and be a continual 'nuisance' reminder of the disease and the means for combating it. But this was impossible of accomplishment with only two Lecturers. It was clear that the people themselves must become responsible for spreading the gospel of immunisation - they must be ordained into the service of the ministry of health.

It was recalled that as soon as a Bantu meets or passes another he uses the greeting "Sa ku bona, u sa pile" - (I see you - are you well) - the greeting never varies. It was therefore proposed to get the Bantu, whenever they meet anyone with an infant to add to the greeting "I see your child also, has it been protected?"

Bantu Ministers' Fraternal

The above group was the first to whom the plan of "Your Brother's Keeper" was presented. Bantu ministers, in common with European ministers of religion have a monthly meeting called a 'fraternal'. The

meeting had been specially called. European superintendent ministers of all denominations had first been contacted so that their Bantu ministers would be sure to be present. The response was excellent. Eleven denominations were represented.

The germ of the presentation was that it was obligatory for Christian leaders as 'watchmen' to blow a 'trumpet of warning' to their people when danger was approaching their people; that the Christian ethic, in fact, demanded a practical interest in and concern for one's neighbour.

The challenge was accepted unanimously. Ministers booked the Bantu Lecturer to address their congregations on the subject in order to indoctrinate the lay folk to become messengers of the protective gospel of health.

The congregations themselves were enthusiastic. The following is a typical after meeting speech spontaneously given by one of the members:

"You people are like a light in a dark world. Our ancestors told us to cut our skin when attacked by diseases of witchcraft to exorcise the trouble; for other sicknesses to induce vomiting, but no one ever dreamed that a prick of a needle with medicine in it could protect our children from "the pestilence that walketh about".

Schools:

At schools, the Lecturer addressed the entire living body of students, menials, teachers, and the Principal invariably finished with a strong appeal for co-operation; the audience at some schools numbered over a thousand. The campaign still progresses.

Toward Ascertaining the Immunity of the Natal Indian to Diphtheria:

The diphtheria antitoxin content of the serum of the Bantu had been assayed on a number of occasions, but no investigation of a similar nature had been carried out on the Natal Indian. It was important, therefore, to obtain 'bloods' from certain age groups amongst Indian children to assist the South African Institute for Medical Research, Johannesburg, to acquire a knowledge of the distribution of antitoxin among children for the profitable planning of immunisation campaigns.

This could never be accomplished without the softening up of the health education unit. It is never an easy task to persuade non-Europeans in the interests of science, if ultimately in their own interests, to foregather at given venues for the purpose of giving blood for which there is no visible payment - not even an injection! The Asiatic Lecturer accomplished a herculean task in group work, involving house to house contacts, to persuade mothers to bring 331 children for test purposes. Although they had been warned that sick children could not be used, inevitably the sick children were brought and had to be weeded out causing a further hold-up on the roadside where the mobile unit waited.

Age groups were:

1st session	6 months - 14 years	=	116 bloods taken;
2nd session	6 months - 6 years	=	100 bloods taken;
3rd session	6 years - 10 years	=	115 bloods taken.

Film Production: Movie and Stills: All Colour:

"Except I see ..... I will not believe". These immemorial words were spoken ages ago by a man whose confused mind was trapped in a prison of incredulity and doubt and have rung down through the ages until now they echo in the minds of the non-Europeans at this stage of their development when all the old ways are being eclipsed by the new. Deep in their hearts is cradled the corrosive doubt "can I really believe all that is told me about health and illness, about malnutrition and its causes, about pests which cause disease?" The medium for resolving these doubts is the visual aid - films, photos, transparencies whereby the cameraman can faithfully portray conditions which to see is to believe.

Malnutrition Series of Stills (Colour):

This was dramatically confirmed when for the first time in the history of health education in South Africa the Bantu were introduced to the ravages of deficiency diseases through the visual medium. It was also the first attempt to train the lay-eye of the Bantu instantly to detect signs of deficiency in children. A sequence of 30 colour pictures had been prepared for us on the daylight cinema van and also by viewer for the pedestrian Lecturer. The introductory pictures portrayed Bantu infants suffering from malnutrition with manifestations of black patches on the skin; of hair with ginger tinges; patches on the head devoid of hair; hunger oedema. Pictures of balanced diet which would prevent these conditions followed. The sufferers photographed were children in King Edward VIII Hospital, most of whom according to hospital information were illegitimate and some of whom had been abandoned by their parents.

The impact on the crowds everywhere was explosive - indignantly explosive - against women of their own race who neglected their children and the clinic in their midst because of laziness, ignorance and shimuyane (liquor).

At one stand while the Lecturer was commentating on the film, another Lecturer whose duty it is to move amongst the crowd, suddenly spotted a 'gingery' little head. He approached the mother who put her hand to her mouth and said "please don't shout about it, I am already in shame" - and this before he had uttered a word! The father joined them and confessed shame at the neglect, with promise of immediate attendance at clinic.

It was expedient to show the series to fathers at factories in order that they should bring pressure to bear on their womenfolk who are chronic sufferers from procrastination; it also fulfilled the requirements of Bantu tradition.

At more than one of these 'fatherly' gatherings, there was heard a note of poignancy. Said one man, "my children at the kraal are dead; I am not without money ... I have many cattle and many goats but no child; let me have one of those neglected infants; it shall be fed as your pictures show."

Bilharzia:

This was the subject chosen by the Department for its first 16 mm (movie) colour production. Its running time is 40 minutes with a full sound recording.

The handling of the theme is unique in that it has been made to serve two racial groups - the Bantu and the Indian.

Following the prologue, the first movement portrays an environmental setting common to the two races, with houses built adjacent to rivers;

the habitual usage of river water for household washing, bathing and drinking,and as a children's playground.

Strong emphasis is placed on the fact that rivers and streams are invariably SICK because they are polluted; polluted by wastes from lavatories built on their banks as well as directly by wastes from humans and animals.

From generalising on the infections found in polluted rivers, such as typhoid, the narrative moves into the particular source of bilharzia infections - a certain snail, which is also a SICK snail because invaded by the miracidium parasite. A fine set of miracidae are shown, much enlarged, followed by a set of the parasites in their changed form with their changed name cercariae.

A large diagrammatic sketch points the course of the infective cycle, from one infected human host to another.

The epilogue gives Bantu and Asiatic traditional teaching on the necessity of keeping rivers free of pollution.

At the time the above film was shot, three sets of colour stills were taken with only minor differences, with sound commentation on discs.

Milk Control:

The first colour movie production for Europeans was devoted to the interests and education of farmers and dairymen under the title "From Pastures to Pasteurisation" - from cow to consumer: between that span there are shots of buildings with structural defects; unhygienic byres: fly breeding: water supplies: cans unprotected from sun and dirt: inadequate cooling plant, all of which are compared with their ideal counterpart without which milk will be inferior. The scenic background is chiefly from East Griqualand and Natal.

Keeping milk as cool as possible en route to the City plant is a vital point too often overlooked by farmers who leave cans in blazing sunshine giving bacteria deplorable opportunity to increase. The good husbandman, however, builds a small shelter to shade his cans from heat - such shelters are depicted. The final sets include the interior of a large pasteurising factory with its fascinating human-like machinery. The running time is 40 minutes. Sound has yet to be added before the film can go into circulation on the Department's programmes.

Milk Control: Natal and East Griqualand:

A new group figured on the health education programme this year in pursuance of the Department's policy to educate farmers and dairymen in cleaner milk production. At rural centres film demonstrations were given on hygienic methods of milk production. The film technician supervised blacking-out, performed all projections and handled voltage difficulties. The Durban Municipal Veterinary Medical Officer was present on all occasions for the purpose of conducting discussions after the shows. These occasions were so successful that they are scheduled on next year's programme.

Royal Agricultural Show: Pietermaritzburg:

To further stress the need for hygiene in milk production and to include dairymen and farmers in rural areas who had not, because of distance, seen the abovementioned film programmes, the Department participated in a combined display with the Natal and East Griqualand Fresh Milk Producers' Union and Durban Milk Suppliers' and Distributors' Association. An exhibit, produced by the film technician, declared in colourful captions, enhanced by pulsating lights, that "Clean Milk and You go well together". In an adjoining booth, packed houses viewed films and Disney health cartoons from the Department's film library with great interest. Subjects included Animal Husbandry, Breeding in Relation of Milk Production, Hygiene on the Farm. A typical remark by a member of the public was, "I am a farmer's wife; I'm glad I went in: I enjoyed it enormously."

A dairies' inspector was on duty at the Milk Pavilion; judging by the number of farmers with whom he was constantly in deep consultation, he was contributing his quota to health education.

Poliomyelitis: The unfamiliar Word - Bantu.

To the Bantu, poliomyelitis is a new thing. In building-up the talk to induce them to bring children for immunisation, photographs were taken of disabled victims, which were shown on the screen: the economic factor was particularly stressed in regard to disablement which could prevent a child from ever becoming a wage earner. The loudspeaker began, "Zulu, we have a new thing to warn you of, a disease to save you from, a dread disease, but one for which the Fathers of the City are sending you protection as they have sent protection from diphtheria; the new disease is called 'uvendhle' meaning 'the limb robbed of strength'."

The Deserted Street - Asiatic:

The Asiatic Lecturer had done his 'softening-up' for poliomyelitis over the loudspeaker and from door to door. Early one morning scheduled for immunising Asiatic children in a very congested area, he went with the mobile loudspeaker just to remind them of the date. The van went through streets and lanes which were entirely deserted as if the inhabitants had fled from destruction. Home after home was deserted; the Lecturer left the van to investigate but could find no one to question; finally a Grannie was found. She smiled at his anxious questions and said, "But you yourself told them to be there early!" - and they were there, at the venue - over 800 of them!

Health Officials' Congress:

Time fails to tell of work done on Smoke Abatement (Smog), Enemata (Bantu), extensive programme for the Government in its"attack on T.B. in an Indian Housing Scheme" and factory work; but mention must be made of the above Congress held in the Red Cross Hall and attended by approximately 300 delegates. During this event a paper was read by the City's Health Educator on "The Practical Achievement of Health Education". It was given prominence in "The Star", Johannesburg, and in the local press; delegates remarked on the originality of techniques practised and were particularly impressed by the section on the training of Bantu personnel. One afternoon was devoted to films produced by the film unit viz: Bilharzia and T.B. (both in colour). An imported film entitled "Guilty Chimneys" was shown as background to a paper on air pollution. In the gallery of the hall was a display of the visual 'props' of the Section. Two notable items were a nutrition display and 30 malnutrition pictures. Both the Health Educator

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and Technician were kept very busy answering questions on :

Training of personnel;
Technique of teaching;
Methods of presentation;
Films, their production and illustrative matter;
Sound dubbing, etc.

At the close of Congress a resolution proposed by Mr. W.J. van der Merwe, Under Secretary for Nutrition, and seconded by Dr. J.M. Latsky, both of the Union Department of Nutrition was adopted by Congress: "Congress notes with interest and appreciation the pioneer work undertaken by the Health Department of the Durban City Council in its practical approach to the problem of Bantu Health and Nutrition Education and recommends that all similar Departments in at least the larger centres of the Union, continue to explore every facility available to them, potential or otherwise, in promoting health and nutrition along realistic lines." ... This was a gracious word of encouragement to the pioneers!

"So you feel" someone asked, "that if you convert people to your way of thinking about health, your task of education is accomplished?" "No indeed; if that is all we do, we have failed - abysmally: we have rather to capture the very citadel of man - his will; to know and not to do is failure but to know and <u>will</u> to put the knowledge into practice, however arduous, that is a very different thing. It has always been the hardest task to bend the will to the deed - as Drinkwater the poet says:

"The will ... there lies our bitter need
Give us to build above the deep intent
The deed, the deed;"

..... a baby immunised: a father cured of T.B.; a mother's feet set on the way to clinic attendance: the family's food protected from flies: 9 rows of beans and a pumpkin patch where formerly were weeds - all these are deeds which crown our task.

TOTAL ATTENDANCES AT ALL LECTURES

Race	Talks	Central	Greenwood Park	Sydenham	Mayville	Umhlatuzana	South Coast Junction	Group	Loud Speaker
E.	Group	1,748	14	-	-	-	70	1,832	-
	Loud-speaker	-	-	-	-	-	-	-	-
C.	Group	-	-	-	-	-	-	-	-
	Loud speaker	-	-	1,085	-	-	-	-	1,
B.	Group	178,989	6,601	3,173	23,142	7,220	17,394	236,519	-
	Loud speaker	21,142	7,762	2,012	39,224	5,865	31,212	-	107,
A.	Group	5,775	3,089	5,212	2,546	2,298	3,652	22,572	-
	Loud speaker	7,765	11,665	19,623	4,740	3,727	11,334	-	58,
Totals	Group	186,512	9,704	8,385	25,688	9,518	21,046	260,853	-
	Loud speaker	28,907	19,427	22,720	43,964	9,892	42,546	-	167,
							GRAND TOTAL		428,009

N.B. Figures include film shows to farmers in East Griqualand, Natal and Royal Agricultural Show, Pietermaritzburg.

Loudspeaker talks, lectures in hall, group talks and explanatory announcements covered the following:

Bilharzia
Immunisation
Personal Hygiene
DDT
Scabies
Vi-test
Ishishimayana
Worms
Poliomyelitis
Infectious Diseases
Nutrition
Pest Control
Refuse Dumping
Tuberculosis
Venereal Diseases
Gastro-Enteritis
Food-Poisoning
Skimmed Milk
and Water.

During the year 396 films were shown and these covered the following subjects:

African Mirror
*Bilharzia
Breeding for Milk
*Centenary Film
Dental Caries
Disneys T.B.
*Foodhandler Slides
Hookworm
Hygiene on the Farm
*Indaba Pansi Ka Muti (Nutrition)
Nutrition
*Save the Children
Two Brothers
T.B.Cattle
What is Disease?
Two Families
Rats
Milk
String of Beads
Sanitary Market
Chain Stoker
*Bilharzia Slides
Playground Safety
*Anghikatali
Breeding for Milk
Bantu Grow New Food
Cleanliness Brings Health
Defence Against Invasion
Feeling of Hostility
Food Poisoning
Human Body
Insects as Carriers of Disease
Infant Care
Planning for Good Eating
*Then and Now (T.B.)
Tuberculosis
Vaccinate Against Smallpox
Winged Scourge
*Enemata
Shadow and Sun
Smog
Contagious Abortion
Guilty Chimneys
Fire Without Smoke
Meat
*Malnutrition Slides

N.B. Films include shows to farmers in East Griqualand, Natal and the Royal Agricultural Show, Pietermaritzburg.

* Departmental Productions.

XVII. MATERNITY AND CHILD HEALTH

Statistics

Notification of Births

There is a small decrease in the total number of notified births. Comparison with last year's registration is as follows:

	1956	1955
European	3,005	2,955
Coloured	764	763
Bantu	4,922	4,980
Asiatic	5,685	5,754
Total	14,376	14,452

Still Births

	Notified	Still Birth Rate	
European	31	10.2	(13.02)*
Coloured	11	14.3	(16.0) *
Bantu	163	32.05	(38.4)*
Asiatic	162	27.7	(28.5)*

* 1955 figures in brackets

Infant Mortality

The infant mortality rate is computed as the number of deaths under the age of one year registered, per 1,000 live births notified. It will be observed in the detailed figures for notified births that more "imported" Bantu births than "Durban" births take place in the City's Hospitals. Many of these children are not taken home immediately and there is no doubt that they contribute to the numbers of infant deaths. The death registers do not reflect place of residence, only the place of death so that it is impossible to correct for outward transfer. The figures below, therefore, while reasonably accurate for other races are quite unreliable for the Bantu group. (See Introduction).

Infant Mortality Rate

European	24.6 (17.9)
Coloured	45.8 (60.2)
Bantu	333.6 (307.6)
Asiatic	77.04 (70.2)

Supervision of Midwives

Accommodation available for Maternity Cases

	E.	C.	B.	A.	Total
Hospitals	50	30	219	55	353
Nursing Homes	97	-	-	-	97

No. of Registered and Unregistered Midwives on Municipal List (Private Practising in Durban)

	Registered	Unregistered
European	13	1
Coloured	5	4
Bantu	1	-
Asiatic	2	132
Total	21	134

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No. of Confinements Attended by Midwives

	Registered	Unregistered	Total
European	146	11	157
Coloured	23	10	33
Bantu	-	6	6
Asiatic	145	3,030	3,175
Total	314	3,057	3,371

Ante-Natal Clinics

The Department conducts a small ante-natal clinic for European mothers who have arranged to be confined by a midwife only.

The Asiatic clinic is well attended and serves the dual purpose of pre-natal care for the mothers, and of supervision and educating the numerous untrained Indian "midwives". It is felt that this is a better policy than trying to eliminate these midwives, as this would tend to drive them underground.

Clinic Attendances

	No. of Sessions	Attendances
European	21	71
Coloured	12	40
Bantu	-	-
Asiatic	95	3,673

Report by Medical Specialist in Charge of Clinics (Dr. L.Raftery, M.R.C.O.G., M.R.C.S., L.R.C.P.)

"When first I attended the City Health Ante-Natal Clinics, it appeared to me that the expectant mothers who attended the clinic regard it very much as an employment agency; as somewhere to which they had to come, just prior to delivery, to hire a midwife. It has been gratifying to note that this attitude is altering and that the expectant mothers are beginning to regard the clinic in its true light, as a place where they can receive proper pre-natal care and advice. These mothers now make, not merely the one indispensable visit, but attend 3 or 4 times. This enables me to effect more satisfactory and efficient work because, when a woman attends, for the first time, late in pregnancy, it is more difficult to correct an incorrect position of the baby or to control a medical complication, than it is, at earlier visits, to prevent these complications from occurring.

One feels also that the mothers are taking more notice of the advice received, and are carrying out instructions much more faithfully than heretofore. One still has difficulty often in convincing the expectant mother and her family of the occasional necessity of her labour being conducted in a hospital. One is still often faced with the difficulty of making the patient conscious of the fact that it is her safety and the safety of her child which is our concern; unfortunately it is sometimes the occurrence of a tragedy or near tragedy which brings this home to the patient and her relatives.

I feel that our clinics are becoming increasingly popular with midwives and doctors and the latter, in increasing numbers, advise many mothers to attend and to bring their babies to our clinics.

Our routine of blood testing is of value even though the venereal problem is not as great among the Indian mothers as it is among the Bantu (we have had about 50 positive results in over 3,000 cases). Here again the attendance of the mothers earlier in pregnancy is of paramount importance.

With regard to the European and Coloured Ante-Natal Clinic at Gale Street, the attendances have increased so markedly that I feel it is now necessary to hold one extra clinic i.e. to have one Thursday afternoon a month for the European mothers and one other Thursday afternoon for the Coloured mothers.

I cannot speak too highly of the Health Visitors with whom it is my pleasure to work. In my opinion they are putting much more into their work than is laid down in the basic requirements of their contracts. It is due to their tactful and skilful handling of all races that the clinics are so well attended, and that the atmosphere of the clinic is so happy."

Infant Clinics

Clinic activities of the Family Health Service Section have progressed under difficulties owing to staff changes. Dr. H. Rose, the Clinical Medical Officer, resigned in May, 1956, as she was proceeding overseas. The vacancy was filled on 1st July, 1956 by Dr. L. Chapman, but she resigned in December, 1956 to take up an appointment in East London. However 2 locums were appointed pending the appointment of a full-time Clinical Medical Officer.

The greatest problem has been to employ suitable Lady Clinic Assistants but now that the salary grade has been improved, it is hoped that they will not be tempted to take up other employment.

The attendances at the various clinics has been extremely good as will be seen from the figures set out hereunder:

	1956		1955	
	Total Clinic Sessions	Total Attendances	Total Clinic Sessions	Total Attendances
Europeans	873	3,6559	922	82,368
Coloureds	167	9,142	166	8,469
Bantu	872	92,927	908	88,213
Asiatic	485	39,312	569	37,169
Total	2,397	177,940	2,565	166,219

Breast Feeding Survey

In order to ascertain the percentage of babies attending the Child Health Clinic, who were still breast fed at the age of 6 months, a survey was carried out by taking a cross section of attendances at the various clinics. The result revealed the following:

	Breast Fed at Age of 6 months
European	73½%
Coloured	87%
Bantu	92%
Asiatic	79%

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As these figures indicate a higher proportion of breast fed babies than was thought to be the case, further surveys are being conducted among mothers who do not attend child health clinics.

Cato Manor Clinic

This clinic, which is held daily for families in the Cato Manor area, is still very popular. It is pleasing to note that a large number of mothers are attending more regularly with their babies and not waiting until they are ill.

The arrangement whereby the curative services of the Provincial Clinic side by side and in close collaboration with the Child Health Services of the City Health Department is one which serves the community conveniently. Set out below for purposes of comparison are the total attendances at the Child Health Clinics and the number of cases referred to the Provincial Clinic during the years 1953-1956.

Year	Total Attendances Child Health Clinics		Total No. of Cases referred to Provincial Clinic	
	B.	A.	B.	A.
1953	47,292	4,802	14,685	1,853
1954	53,844	5,009	12,245	2,065
1955	59,457	5,023	23,198	2,372
1956	68,911	5,462	22,666	1,724

Medal Awards for Student Nurses: Addington Hospital

On the 15th September, 1952, the City Council adopted a resolution to provide for the annual award of one gold and one silver medal to the most outstanding student nurse at Addington Hospital.

On awarding these medals due consideration is given to examination results, standard of practical work attained, and also the personal qualities and attributes of the various condidates.

The awards for 1956 were as follows:

Gold Medal: Student Nurse C.A.Stephens
Silver Medal: Student Nurse S.M.Merton

New Clinic Premises

In December, 1955, the premises which had been occupied by the City Engineer's Department in the adjoining old Infant's School became available for the City Health Department, and the Child Health and Immunisation Sections moved in on 12th January, 1956.

Owing to their greater area, the new premises have proved a great boon, especially to the Immunisation Section to which unit three large rooms were allocated.

Proposed New Clinics

(a) Umlazi Glebe Lands: Negotiations were started with the Manager, Native Administration Department with the object of obtaining the use of one of three European houses falling in the buffer zone, and which have been evacuated. Any of these would serve the purpose admirably. There is no doubt that this new housing scheme of approximately 800 families would derive great benefit from a child health clinic.

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(b) Springfield Health Centre: In June, 1956, the Union Health Department decided to abandon the Health Centre Scheme at Springfield, and offered the Department the use of one of the huts for a child health clinic. The Public Health Committee agreed to the principle on 16th August, 1956. Negotiations are proceeding regarding rental, equipment and staff.

(c) Umgeni River - Athlone Bridge Area

Efforts were made to find a suitable site or suitable premises in this area. So far it has not been possible to establish a clinic.

(d) Sydenham Area

Clinics are badly required in the Sydenham and Sparks Road areas. An investigation of the possible sites and premises in these areas is being made.

Attendances at Gale Street, Brook Street and Mobile Clinics: January - December, 1956

	European Clinics			Non-European Clinics Mobile, Gale/Brook Street				Grand Total	
	Gale Street	Mobile Clinics	Total	C	B	A	Total	1956	1955
Total Number of Sessions	227	646	873	167	872	485	1,522	2,395	2,571
Total Sessions for Children	206	646	852	153	872	390	1,415	2,267	2,407
Total Ante-Natal Sessions	21	-	21	12	-	95	107	128	146
Total Attendances at Clinics	7,085	29,474	36,559	9,142	92,927	39,312	141,381	177,940	166,219
New Cases (Included in total above)	705	2,214	2,919	893	19,948	7,991	28,832	31,751	30,021
Total Attendances of Infants	3,735	14,005	17,740	2,921	34,843	12,282	50,046	67,786	61,973
Total Attendances Toddlers and Pre-School	1,531	8,815	10,346	3,622	25,651	12,505	41,778	52,124	46,606
Total Attendances, Nursing Mothers	1,748	6,654	8,402	2,559	32,433	10,852	45,844	54,246	53,633
Total Attendances Expectant Mothers	71	-	71	40	-	3,673	3,713	3,784	4,001
Test Feeds	86	150	236	21	1	7	29	265	251
Mothers Instructed In Minor Ailments	366	1,393	1,759	909	25,220	7,077	33,206	34,965	33,421
Health Talks/ Demonstrations Given	663	2,698	3,361	720	13,640	4,063	18,423	21,784	20,662
Number of Cases Seen by Doctor	1,417	1,382	2,799	457	392	3,239	4,088	6,887	7,010

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Health Visitors' Work:

		E.	C.	B.	A.	Total
First Visits - Feeding	(Breast	992	370	382	5,532	7,276
	(Mixed	132	12	271	539	954
	(Artificial	449	7	30	221	707
		1,573	389	683	6,292	8,937
Re-Visits - Feeding	(Breast	631	104	15	1,792	2,542
	(Mixed	642	140	54	1,318	2,154
	(Artificial	1,892	179	8	810	2,889
		3,165	423	77	3,920	7,585
Older Children	1st visits	722	108	2,635	6,133	9,598
	2nd visits	4,518	1,351	99	4,440	10,408
		5,240	1,459	2,734	10,573	20,006
No. of above visits made to Protected Infants		415	100	-	-	515

Other Visits	E.	C.	B.	A.	Total
Infant Deaths	9	-	1	18	28
Infectious Diseases or Contacts	11	-	-	8	19
Reports on Insanitary conditions	16	1	-	-	17
Nursery Schools/Protected Infants' Homes -	-	-	42	-	42
	36	1	43	26	106

Total Visits

First Visits - Infants	8,937
Re-visits - Infants	7,585
Older Children	20,006
Other Visits	106
	36,634

Dental Caries	E.	C.	B.	A.	Total
No. of children found to be suffering fron dental caries	114	6	227	344	691
No. of cases of dental caries which received attention after advice	64	2	-	4	70
	178	8	227	348	761

These figures are based on observations by Health Visitors at clinics and on home visits among pre-school children. Professional dental examination would certainly disclose a far greater incidence of caries. There are no clinic facilities for pre-school children, other than extraction clinics at the Provincial Hospitals.

Health Visitor Students attending Clinics: - Europeans - 4.

Medical Examinations of European Female Entrants to the Municipal Service - 228

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Births Notified

	E.	C.	B.	A.	Total
Durban	1,707	141	837	940	3,625
Greenwood Park	323	60	262	718	1,363
Sydenham	29	184	195	1,118	1,526
Mayville	82	195	2,511	1,117	3,905
Umhlatuzana	156	35	167	309	667
South Coast Junction	708	149	950	1,483	3,290
Total City Births	3,005	764	4,922	5,685	14,376
" Imported	713	57	5,701	394	6,865

Illegitimate Births Notified

Durban	41	28	584	3	656
Greenwood Park	4	7	171	10	192
Sydenham	-	32	133	14	179
Mayville	1	41	1,456	17	1,515
Umhlatuzana	1	6	121	2	130
South Coast Junction	6	25	480	23	534
Total City Births	53	139	2,945	69	3,206
" Imported	3	13	2,281	16	2,313

Stillbirths Notified

Durban	17	1	24	24	66
Greenwood Park	2	-	6	17	25
Sydenham	-	2	5	37	44
Mayville	1	5	102	35	143
Umhlatuzana	4	-	1	12	17
South Coast Junction	7	3	25	37	72
Total City	31	11	163	162	367
" Imported	16	2	171	20	209

Infantile Deaths

Durban	45	9	284	66	404
Greenwood Park	5	5	31	59	100
Sydenham	-	5	32	87	124
Mayville	2	10	1,110	107	1,229
Umhlatuzana	7	1	27	15	50
South Coast Junction	15	5	158	104	282
Total City	74	35		428	2,189
" Imported	22	3		36	117

Infantile Deaths: European

	Hrs.	Weeks			Months			
	0-24	0-1	1-2	2-4	1-3	3-6	6-12	Total
Prematurity	15	3	3	-	-	-	-	21
Intracranial Haemorrhage	1	5	-	-	-	-	-	6
Spina Bifida	1	-	-	-	-	-	-	1
Congenital Heart	-	1	-	1	-	-	-	2
Congenital Atelectasis	7	3	-	-	-	-	-	10
Congenital Pyloric Stenosis	-	1	-	-	-	-	-	1
Congenital Malformations	-	1	-	-	-	-	-	1
Mongolism	-	1	-	-	-	-	-	1

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Other Diseases Peculiar to Infancy	Hrs. 0-24	Weeks 0-1	1-2	2-4	Months 1-3	3-6	6-12	Total
Icterus Gravis, etc.	1	3	-	2	-	-	1	7
Gastro-Enteritis	-	-	-	-	1	2	1	4
Broncho Pneumonia	-	2	2	-	1	-	1	6
Lobar Pneumonia	-	-	-	-	-	-	1	1
Pneumonia	-	1	-	-	-	1	-	2
Meningitis	-	-	-	-	-	-	1	1
Diphtheria	-	-	-	-	-	-	2	2
Unknown	-	-	-	1	-	-	-	1
Natural Causes	-	2	-	-	-	1	1	4
Ill-defined Causes	2	-	-	-	-	-	1	3
Total	27	23	5	4	2	4	9	74

	Male	Female	Total
Durban	26	19	45
Greenwood Park	3	2	5
Sydenham	-	-	-
Mayville	2	-	2
Umhlatuzana	5	2	7
South Coast Junction	6	9	15
Total City	42	32	74
" Imported	13	9	22

Infantile Deaths: Coloured

	Hrs. 0-24	Weeks 0-1	1-2	2-4	Months 1-3	3-6	6-12	Total
Prematurity	6	1	-	1	-	-	-	8
Congenital Atelectasis	5	-	-	-	-	-	-	5
Congenital Abnormalities	1	-	-	-	-	-	-	1
Other Diseases Peculiar to Infancy								
Icterus Gravis, etc.	-	2	-	-	-	1	-	3
Gastro-Enteritis	-	-	-	-	1	4	1	6
Malnutrition	-	-	-	-	1	-	-	1
Pneumonia	-	-	-	-	-	-	1	1
Meningitis	1	-	-	-	-	-	-	1
Pneumococcal Meningitis	-	1	-	-	-	-	2	3
Haemophilia	-	-	-	-	-	1	-	1
Homicide	1	-	1	-	-	-	-	2
Unknown	1	-	-	-	-	-	-	1
Natural Causes	1	-	-	-	-	-	1	2
Total	16	4	1	1	2	6	5	35

	Male	Female	Total
Durban	6	3	9
Greenwood Park	4	1	5
Sydenham	2	3	5
Mayville	4	6	10
Umhlatuzana	1	-	1
South Coast Junction	3	2	5
Total City	20	15	35
" Imported	1	2	3

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Infantile Deaths: Bantu	Hrs. 0-24	0-1	Weeks 1-2	2-4	Months 1-3	3-6	6-12	Total
Prematurity	90	92	23	9	10	1	-	225
Intercranial Haemorrhage	13	19	-	-	-	-	-	32
Congenital Heart	-	-	-	2	-	-	-	2
Congenital Malformations	-	1	1	1	-	-	-	3
Congenital Atelectasis	16	16	1	-	1	-	-	34
Monstrosities	-	1	-	-	-	-	-	1
Acute Hydrocephalus	1	-	-	1	-	1	-	3
Spina Bifida	-	-	-	-	-	1	-	1
Other Diseases Peculiar to Infancy								
Icterus Gravis, etc.	3	29	4	2	1	2	-	41
Gastro Enteritis	-	4	15	16	129	106	149	419
Amoebic Dysentery	-	-	-	-	1	-	3	4
Bacillary Dysentery	-	-	-	-	12	7	13	32
Malnutrition	-	-	-	3	10	5	9	27
Bronchitis	-	-	-	-	-	1	1	2
Broncho Pneumonia	-	16	13	12	78	75	138	332
Lobar Pneumonia	-	1	-	-	3	1	4	9
Pneumonia	-	3	1	-	-	-	3	7
Pulmonary Tuberculosis	-	-	-	-	2	5	12	19
Miliary Tuberculosis	-	-	-	-	1	3	3	7
T.B.Meningitis	-	-	-	-	1	3	5	9
Meningitis	-	2	1	1	1	5	3	13
Meningitis (Other Forms)	-	-	-	-	-	2	-	2
Congenital Syphilis	-	-	-	-	1	1	1	3
Diphtheria	-	-	-	-	1	1	2	4
Measles	-	-	-	-	-	-	3	3
Mastoiditis	-	-	-	-	-	-	1	1
Convulsions	-	2	-	-	1	-	1	4
Septicaemia	-	-	-	-	-	-	2	2
Megoloblastic Anaemia	-	-	-	-	-	-	1	1
Leukaemia	-	-	-	-	-	1	-	1
Fatty Liver	-	-	-	-	-	1	1	2
Peritonitis	-	-	-	-	1	-	-	1
Kwashiorkia	-	-	-	-	-	-	4	4
Natural Cuases	16	30	4	2	12	16	22	102
Ill-defined Causes	9	24	12	10	78	60	97	290
Total	148	240	75	59	244	298	478	1,642

	Male	Female	Total
Durban	160	124	284
Greenwood Park	17	14	31
Sydenham	18	14	32
Mayville	550	560	1,110
Umhlatuzana	10	17	27
South Coast Junction	90	68	158
Total City	845	797	1,642
" Imported	24	32	56

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Infantile Deaths: Asiatic	Hrs. 0-24	Weeks 0-1	Weeks 1-2	Weeks 2-4	Months 1-3	Months 3-6	Months 6-12	Total
Prematurity	21	55	19	5	2	-	-	102
Intercranial Haemorrhage	8	11	-	2	1	-	-	22
Spina Bifida	2	-	-	-	-	-	-	2
Congenital Debility	-	3	-	1	-	1	-	5
Congenital Malformation	-	-	1	-	-	-	-	1
Congenital Atelectasis	6	4	1	-	-	1	-	12
Other Diseases Peculiar to Infancy								
Icterus Gravis Neon., etc.	1	8	2	2	1	1	2	17
Gastro-Enteritis	-	1	3	6	25	20	34	89
Dysentery	-	-	-	1	-	-	-	1
Bacillary Dysentery	-	-	-	1	-	2	-	3
Bronchitis	-	1	2	1	4	4	10	22
Broncho Pneumonia	1	8	6	9	18	19	41	102
Lobar Pneumonia	-	-	-	1	3	1	-	5
Pneumonia	-	2	-	1	2	-	3	8
Malnutrition	-	-	1	-	4	1	1	7
Miliary Tuberculosis	-	-	-	-	1	-	1	2
T.B.Meningitis	-	-	-	-	-	-	1	1
Virus Flu	-	-	1	-	-	-	-	1
Meningitis	-	-	-	1	2	-	-	3
Whooping Cough	-	-	-	-	-	-	1	1
Diphtheria	-	-	-	-	-	-	2	2
Mastoiditis	-	-	-	-	-	1	-	1
Otitis Media	-	-	1	-	-	-	-	1
Abscess of Lung	-	-	-	-	-	-	1	1
Intestinal Obstruction	-	-	-	-	1	-	1	2
Nephritis	-	-	-	-	1	-	-	1
Aplastic Anaemia	-	-	-	-	-	-	1	1
Poliomyelitis	-	-	-	-	-	-	1	1
Septicaemia	-	-	-	-	-	-	1	1
Natural Causes	1	6	-	-	1	-	-	8
Ill-defined Causes	1	-	1	-	5	1	5	13
Total	41	99	38	31	71	52	106	438

	Male	Female	Total
Durban	44	22	66
Greenwood Park	37	22	59
Sydenham	54	33	87
Mayville	66	41	107
Umhlatuzana	6	9	15
South Coast Junction	54	50	104
Total City	261	177	438
" Imported	17	19	36

Maternal Mortality

Race	No. of Registered Deaths from Causes Due to Childbirth	No. of Births: Live	Still	Total	Death Rate Calculated on Live Births	Death Rate Calculated on Live and Still Births
European	-	3,005	31	3,036	-	-
Coloured	1	764	11	775	1.2	1.2
Bantu	7	4,922	163	5,085	1.4	1.3
Asiatic	12	5,685	162	5,847	2.1	2.05

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Causes of Maternal Deaths:

	E.	C.	B.	A.	Total
Post-partum Haemorrhage	-	-	2	1	3
Ruptured Uterus	-	-	-	1	1
Ruptured Ectopic Pregnancy	-	-	3	1	4
Caesarian Section	-	-	1	-	1
Eclampsia	-	-	-	2	2
Severe Pre-Eclampsia Obstetric Shock	-	1	-	2	3
Accidental Haemorrhage of Pregnancy	-	-	-	1	1
Air-Embolism Interference Pregnancy	-	-	-	1	1
Exhaustion after Childbirth	-	-	-	2	2
Incomplete Abortion	-	-	1	1	2
	-	1	7	12	20

Supervision of Midwives:

	E.	C.	B.	A	Total
No. of trained midwives practising in Durban	44	5	15	2	66
No. of trained midwives who have ceased to practice	-	-	-	-	-
No. of untrained midwives practising in Durban	1	5	-	131	137
No. of untrained midwives who have ceased to practice	-	-	-	4	4
No. of trained midwives deceased	-	-	-	-	-
No. of untrained midwives deceased	-	-	-	2	2
No. of women practising midwifery who have been warned not to do so unless they apply to have their names put on the list	-	-	-	3	3
No. of midwives prosecuted	-	-	-	-	-
No. of difficult midwifery cases attended to and delivered	1	-	-	1	2
No. of midwives put on the list during the year	-	1	-	11	12
No. of midwives re-instated during the year	-	1	-	-	1
No. of midwives' appliances examined	24	32	-	1,195	1,251
No. of midwives' bags replenished	-	44	-	3,031	3,075
No. of midwives' dressings sterilised	-	55	-	2,807	2,862
No. of midwives' bags sterilised after septic cases	-	-	-	-	-
No. of visits to midwives at their homes or at patients' houses	2	13	-	307	322
No. of midwives who were warned for failing to comply with regulations	-	-	1	14	15

Certificated and Uncertificated European and Coloured midwives' appliances and registers are examined every three months.

Uncertificated practising Indian midwives' appliances are examined every month.

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XVIII. STAFF

The principal occurrences in regard to personnel and staff establishments which merit recording are given below:

(a) Retirements: It is regretted that Dr. D.H.Hooper, Assistant Medical Officer of Health, who joined the Municipal Service on 16th January, 1933, was obliged for medical reasons to retire with effect from 5th September, 1956.

Miss M.Watson, Health Visitor in the Family Health Service Section since 1st February, 1934, retired on pension on 2nd May, 1956.

(b) Resignations: Dr.H.E.Rose, Clinical Medical Officer, Family Health Service Section, since 12th December, 1952, terminated duty on 31st May, 1956, to take up residence in the United States of America. Dr. Rose was succeeded by Dr. Lylie E.J.Chapman, who returned to the Department on 12th July, 1956, after a tour of duty with the World Health Organisation in East and West Pakistan. Dr. Chapman resigned on 7th December, 1956, to take up a more attractive post with the East London Municipality.

(c) Extension of Retiring Age: The compulsory retiring age was raised from 60 to 63 years. Employees who were in the Council's service prior to adoption of the new retiring age may still elect to retire at the age of 60 years, but in the case of all subsequent entrants to the service the retiring age will be 63 years.

(d) Additions to Staff Establishments, etc.: Re-organisation of the Administration Section resulted in the re-designation of a number of posts and the addition of the following new positions:

Senior Clerk (Grade II)	1
Senior Lady Assistant	2
Lady Assistant (in substitution for two posts of Clerk (Grade IV) deleted)	2

The staff employed in the Immunisation service was augmented by the following:

European	
Clinic Sister	2
Lady Assistant	2
Part-time Personnel	
Medical Officers	1,144 hours per annum
Clinic Sisters	918 " " "
Non-European	
Health Assistant	2 (1 Indian and 1 Bantu)

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The staff establishment at the close of the year was:

Section and Position	No.	Incumbent/Remarks
City Medical Officer of Health		Dr. G.D.English, M.B., Ch.B., D.P.H., D.T.M.&.H.
Deputy City Medical Officer of Health	1	Dr. A.Stephen, M.B.E., B.Sc., M.B., Ch.B., D.P.H.
Assistant Medical Officer of Health	1	Dr. D.H.Hooper, M.B., Ch.B., D.P.H. (from 1.1.56 to 5.9.56)
Administration		
(a) European		
Principal Assistant (Admin.)	1	Thomson, A.H. (M.R.S.H.)
Senior Assistant (Financial)	1	Donkin, F.D.
Senior Assistant (Technical)	1	Poplett, D.J. (M.R.S.H.)
Chief Clerk	1	Kibble, G.A.
Senior Clerk (Grade II)	1	
Senior Clerk (Grade III)	2	
Clerk (Grade I)	3	
Clerk (Grade II)	1	
Clerk (Grade III)	5	
Clerk (Grade IV)	2	
Principal Lady Assistant	1	
Senior Lady Assistant	2	
Lady Assistant	8	2 posted to Immunisation Service
Chief Typist	1	
Senior Typist	2	
Typist	5	
(b) Non-European		
Office Assistant (Indian)	1	
" " (Junior) "	1	
Messenger/Cleaner Indian/Bantu	5	
Epidemiology (embracing tuberculosis, infectious diseases and venereal diseases control)		
(a) European		
General Assistant (2nd Grade)	1	
Note: The following staff is posted from the Health Visiting and Health Inspection Sections for full-time duty in this Section: T.B.Control: 5 Health Visitors I.D. and V.D.Control (1 Senior Health Inspector) (1 Health Visitor)		
(b) Non-European		
Health Assistant Indian	6	
" " Bantu	9	
Messenger/Cleaner Indian	1	

Section and Position	No.	Incumbent/Remarks
Health Inspection		
European		
Chief Health Inspector	1	Groom, G.F. Health Inspector's and Meat and Other Foods Certificates of The Royal Society of Health.
Deputy Chief Health Inspector	1	Johnston, M.M. Health Inspector's Certificate of The Royal Society of Health.
Senior Health Inspector Note: Positions allocated to: District and Food Hygiene (5), Epidemiology (1), Dairies (1) Field Hygiene (1), Plans and Housing (1)	9	Ashdown, N.D. Health Inspector's and Meat and Other Foods Certificates of The Royal Society of Health. Bannon, J.D.) Health Inspector's Clayton, A.) Certificate of The Clemenson, J.L.) Royal Society of Crickmore, C.R.A.) Health. Hornby, A.V.) Ingram, W.A.) Smith, A.M.) Young, B.J.)
Health Inspector	35	Aitkenhead, G.J.V. Atkinson, C.E., Benians, P.E. Butler, M.W., Clark, A.G., de Beer, H.H., de Villiers P.D., Green, C.E.O., Harris, J.K., Hogan, J.P., Horton, D.V., Hull, V.H., Khaled, R.A.C., Knowles, D.H., McIver, E.I., O'Brien Mrs. O.N., Phillips. L.G.F., Rees, S.B., Roberts, A.J.L., Roberts, K.W.C., Spencer, D.W., Sutherland, F.T., Sutherland, F.L., Thomas, L.E., Wark, D.S., Weldon, F.J., Woolley G.W.R., Worthington C., All hold the basic Health Inspector's Certificate of The Royal Society of Health, whilst certain personnel hold additional qualifications. No. of vacancies: 7
Health Assistant	6	Learner Health Inspectors.
General Assistant (1st Grade)	5	Engaged full-time on rodent control.
Veterinary Hygiene		
European		
Veterinary Medical Officer	1	Dr. F.E.Cavanagh, B.V.Sc.
Laboratory Assistant	2	

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Section and Position	No.	Incumbent/Remarks
Field Hygiene		
(a) European		
Supervisor	1	Nourse, A.D.
General Assistant (1st Grade)	1	
General Assistant (2nd Grade)	6	
(b) Non-European		
Clerk: Bantu	1	
Field Assistant: Indian	5	
Health Assistant: Bantu	2	
Spotters (Mosquito):Bantu	6	
Labourers: Indian and Bantu	82	Includes 6 supernumery positions
Health Visiting		
(a) European		
Chief Health Visitor	1	Eckhoff, Miss E.J. Medical and Surgical, Midwifery, Mothercraft and R.S.H. Health Visitor's and School Nurse's Certificate.
Senior Health Visitor	1	Robinson, Miss S.E.H. Medical and Surgical, Midwifery, Mothercraft and R.S.H. Health Visitor's and School Nurse's Certificate.
Health Visitor Note: Positions allocated to Family Health Service (16), Epidemiology (6), Immunisation (3)	25	Anderson Miss E.M., Barker Mrs. M.I., Brown Miss M., Burdon Miss C.W., Dolkens Mrs. S., Essery Miss M.V., Hamlyn Miss E.F., Harding Miss E., Hook Mrs. E.M., Longmore Mrs. F.B. Maloney Miss K.,Meyerstein Mrs. S., Mitchell Miss B.I., Muller Miss M., Poulton Mrs. M.P.,Rankin Miss E., Schwarz Mrs. C., Stead Mrs. R.J., Taylor Mrs. J.S., Webb Mrs. M.E., Wilde Miss M.A., Whiting Miss A., Wilson Mrs. D. All suitably qualified and registered medical and surgical nurses No. of vacancies: 2
Clinic Sister Note: Positions allocated to Family Health Service (3), Immunisation (2)	5	Norman Miss F.M., Hunter Miss J.W., Sawyer Miss M.C., Edmeades Miss M. (Temporary). All suitably qualified and registered medical and surgical nurses. No. of vacancies: 1

Section and Position		No	Incumbent/Remarks
Clinic Assistant		9	
(b) Non-European			
Health Visitor	Coloured	1	Post vacant
" "	Bantu	6	(All suitably qualified and registered
Clinic Nurse	Bantu	1	(medical and surgical nurses.
Female Nursing Assistant,	Bantu	3	
Female Nurse Aid	Indian	7	
Clinic Orderly	Bantu	1	
Interpreter/Cleaner (Female)	Bantu	1	
Messenger/Cleaner	Indian/ Bantu	6	
Watchman	Bantu	2	
Immunisation			
Note: European staff comprising 3 Health Visitors, 2 Clinic Sisters and 2 Lady Assistants is posted from the Health Visiting and Administration Sections on a full-time basis.			
Non-European			
Immunisation Assistant	Indian	1	
Health Assistant	"	1	
Health Assistant	Bantu	3	
Family Health (Child Hygiene) Service			
European			
Clinical Medical Officer		1	Dr. H.E.Rose, M.B., Ch.B., from 1.1.56 to 31.5.56. Dr. Lylie E.J.Chapman B.Sc., M.B., Ch.B., D.P.H. from 12.7.56 to 7.12.56.
Part-time Clinical Medical Officer		1	Post vacant.
Part-time Medical Specialist		1	Dr. L.Raftery, M.R.C.O.G., M.R.C.S., L.R.C.P.
Health Education			
(a) European			
Health Educator		1	Goddard, Miss E.
Technician		1	Godfrey, D.M.
General Assistant (2nd Grade)		1	
(b) Non-European			
Lecturers (1 Indian and 1 Bantu)		2	
Lecturer (Junior)	Bantu	1	
" "	"	1	Employed full-time on nutrition education of Bantu. Full refund of expenditure on this post granted by Union Department of Nutrition.
Health Assistant	Indian	1	Post vacant.
" "	Bantu	1	

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Section and Position	No.	Incumbent/Remarks
Non-European Health and Medical Services		
V.D.Clinic Staff		
(a) European		
Senior Clinical Medical Officer (City Venereologist)	1	Dr. R.S.Dewar, M.B., Ch.B.
Clinical Medical Officer (Female)	1	Dr. M.McAuliffe, L.A.H., L.R.C.P.S.I.
(b) Non-European		
Bantu Medical Officer	1	Dr. C.N.Dhlamini, L.R.C.P., L.R.C.S., L.R.F.P.S.
Nurse Bantu	4	Suitably qualified personnel
Clinic Orderly(Senior) Bantu	1	
Sideroom Worker (unqualified) Bantu	4	
Clerk "	4	
Labourer "	1	
Medical Bureau		
European		
Senior Clinical Medical Officer	1	Dr. M.Casson M.D., M.R.C.S., L.R.C.P.

TOTAL STAFF ESTABLISHMENT

European	- 159	(including 2 part-time medical posts)
Non-European	- 173	(including 6 supernumery labourers)
Total	332	

REPORT 'B' - HOUSING

There is every indication that the supply of flat housing units now exceed the demand. This is evident by the increasing number of "Flats to Let" notices appearing in the local daily papers or posted on the facades of blocks of flats with many visible uncurtained windows.

Statistics for the year under review show that the trend is now in favour of houses. For example, during the year 1955, plans were approved by the City Council for the erection of 1,150 dwellings and 2,495 flat units; whereas figures for 1956, reflected a total of 1,843 dwellings and 905 flat units.

In view of these figures it is evident that flats are generally only considered temporary accommodation by the average family, pending the availability of a dwelling house when finances permit.

Summary of European Housing as at 31st December, 1956

A. Economic

	Houses	Flats
Selling schemes completed	1,433	-
Selling schemes under construction	99	-
Economic assisted		674

B. Sub-Economic

Aged Poor	50	-
National Housing	-	55
Total	3,012	729

European Population of Durban (Estimated)	153,260
Percentage of Total Population	26.34
Progress in 1956	429 houses

Coloured Housing

The extension to the Sparks Estate Coloured Housing Scheme has progressed favourably, resulting in the provision of an additional 41 dwelling units. A further 40 are under construction.

The Scheme is made up as follows:

Summary of Coloured Housing as at 31st December, 1956

	Houses	Flats
Economic selling - completed	251	-
Economic selling - under construction	40	-
Economic assisted	89	-
National housing - letting	49	-
National housing - letting	-	64
Total	429	64

Coloured Population of Durban (Estimated)	19,260
Percentage of Total Population	3.93
Progress in 1956	124 houses.

Indian Housing

The housing of the Indian population of the City presents the greatest problem of all. Of an estimated population of 171,200, the greater number are sub-economic, who, with an average family of eight and an income of £10. 0. 0. per month, cannot afford to pay a rental of a modern flat or dwelling. Provision of the requisite sub-economic housing would therefore be a most formidable task.

A considerable amount of work to establish a housing scheme, covering a large area in the locality of Merebank, has been thwarted by the Council's inability to reach a satisfactory agreement with certain land owners. When this matter is finalised and the scheme envisaged put in hand, a fair measure of relief in the housing requirements of Indians will be felt.

Meanwhile the Council has been very active in the Springfield area where the established housing scheme is being extended.

Within the last few years 1,500 acres (approximately) forming the greater portion of a select European residential estate known as Reservoir Hills, now within the City's boundary, has been re-zoned under the Group Areas Act, for occupation by Indians.

This estate is well-known for its local scenic beauty for some of the finest panoramic views of the City and coast line.

Summary of Indian Housing as at 31st December, 1956

	Houses	Flats
Economic selling - completed	427	-
Economic selling under construction	112	-
Economic assisted	312	-
National housing	819	-
Total	1,670	-

Indian Population (Estimated)	171,200
Percentage of Total Population	34.23
Progress in 1956	439 houses

Bantu Housing

Shortfall: The following figures estimated by the Manager, Native Administration Department, are the same as quoted in the 1955 Annual Report. The reason for this is that it is considered that the additional requirements due to an increase in population have been offset by the number of units provided during the year under review. The immediate requirements for 1957 are therefore 16,000 family units plus another 8,000 to keep abreast of population increase, and 20,000 beds in single quarters.

Construction in 1956

The following family housing units were constructed during the year.

Umlazi Glebe Lands	125
Lamont Location	292

Cato Manor Emergency Camp

The development of this settlement has progressed according to plan and only a very small portion of the camp has not been fully developed. Work, however, is continuing in this direction. The sites allocated total

3,939, on which are to be found dwellings varying from one to six rooms. Some are primitive, but the majority conform to a fair standard. The majority of shacks are of wood and iron construction and although of second-hand materials, are fairly presentable. The biggest job of all is to health educate the inmates and instil a sense of communal responsibility. The prevailing habit of littering sites with refuse necessitates the constant attention of cleaning gangs.

This project has been the means of providing temporary housing for a population of approximately 70,000 persons at very little cost to the community.

Kwa Mashu (Formerly Duff's Road)

When the Duff's Road Housing Scheme was mooted in 1943, the intention was that it should be built for Indians. However, as time progressed, it became increasingly evident, that something urgent should be done to provide housing for the Bantu to alleviate the appalling conditions which were being created by uncontrolled shack building operations in Cato Manor and other sections of the City. Accordingly, the Scheme was ear-marked for Bantu housing.

The City Council is now embarking upon the initial stages of the construction of this housing scheme, a project which will house some 120,000 persons when completed.

Existing Housing Provisions

Location (Family Housing)	No. of Houses	Population (Estimated)
Baumanville Location	120	800
Lamont Location	1,911	13,400
Chesterville Location	1,265	7,900
Umlazi Glebe Lands	738	4,700
Total	4,034	26,800

Hostels and Dormitories	Beds
Somtseu Road (Male)	7,040
S.J.Smith - Merebank (Male)	4,272
Dalton Road (Male)	1,662
Jacobs (Male)	788
Bell Street (Male)	1,145
Ordnance Road (Male)	447
Grey Street (Female)	687
Jacobs (Female)	64
Total Single Quarters	16,105

Total Persons Housed Municipally	46,939
Estimated Bantu Population of Durban	175,880

Vital information of the various Locations and Hostels is as follows:

Baumanville Location

Completed - 1934 Houses - 120

Water Supply - Piped to individual houses;
Sanitation - Water closets - individual houses;
Ablution - Showers - individual houses;
Washing gullies - individual houses.

Jacobs Family Houses
Total of 64 now connected to dormitories holding 160 beds.

Lamont Location
Houses completed - 1,911
Houses under construction - 800 (home ownership scheme)
Water supply - 1,463 houses have piped supply.
216 have communal standpipes;
Ablution - 1,463 houses have showers.
393 communal washing gullies.
Sanitation - 1,463 houses have water closets.
250 pit latrines.
Clinic Services - Institute for Family and Community Health, Merebank.

Chesterville Location
Completed - 1946
Houses - 1,265
Water supply - individual piped.
Ablution - individual bathrooms and washing gullies.
Sanitation - individual water closets.
Clinic Services - Mother and Baby Clinic weekly - City Health Department;
Ante-Natal Clinic - McCord Zulu Hospital.

Umlazi Glebe Lands
Houses (to date) - 738
Water supply - 42
Sanitation - individual pit privies.

Slum (Shack) Distribution and Elimination

There is little change in the number of shacks distributed throughout the City. They have been reduced to the very minimum possible. The estimated number of persons for the average four-roomed shack is approximately ten.

The approximate distribution of shacks in the Municipal areas is as follows:

South Coast Junction	220
Umhlatuzana	134
Sydenham	60
Mayville	7,025
Greenwood Park	100
Old Borough	Nil
	7,539

Control of Premises (Slums) in Zoned Areas

These zones generally reflect satisfactory improvement. A considerable number of old dwellings have been demolished. On these sites new buildings have been erected, the type of building depending on the town planning scheme. Whilst a number of new structures are for commercial and industrial use, many large blocks of flats have also been erected.

Building Plans

The following is a summary of the building plans received officially for examination and report by this Department during 1956:

Type of Structure	No. of Plans	Estimated Cost
New private dwellings - 2 rooms	228	
" " " - 3 "	671	
" " " - 4 "	419	
" " " - 5 "	471	
" " " - 6 " and over	54	
Total	1,843	£3,168,900
Flats - 1 room	487	
" - 2 "	255	
" - 3 "	138	
" - 4 " and over	25	
Total	905	£1,422,736
Additions to Flats and Dwellings	1,682	£4,210,019
Stores, Shops, Offices	83	£2,387,549
Additions to Stores, Shops, Offices, etc.	709	£756,883
Clubs, Schools, Hotels, Churches	33	£509,253
Additions to Schools, Hotels, Churches, etc.	75	£144,913
Total	2,582	£8,008,617
Grand Total	5,330	£13,600,253

General

The City Engineer recently placed before the City Council a proposal for the establishment of a major Indian village in the area situated between Verulam and Tongaat and a minor scheme to be placed somewhere in the area between Woodlands and Klaanwater (Shallcross).

The farm Klaanwater, which is situated near Shallcross, approximately 10 miles from the Central City Area, was offered to the City for the purchase by private treaty for use as a Bantu or Indian scheme.

The City Council was in favour of the proposals, but the Hon. the Administrator rejected the scheme as he was of the opinion that this area would be required to meet the housing needs of Pinetown and neighbouring townships.

Whilst the biggest portion of the Bantu shack settlements have been incorporated in the Cato Manor Emergency Camp, there still remain others which are situated in the Cato Manor and Umhlatuzana districts.

Of these three are major settlements known as (a) Haviland Road, (b) Raincoat and (c) Newtown.

Conditions, generally, are primitive. Apart from isolated municipal water points "basic sanitation" is almost entirely absent.

Constant pressure is brought to bear on respective land owners concerned to bring about any possible improvements by digging new pit-latrines and burning or clearing refuse to suitable collection points.

(a) Haviland Road

This settlement has decreased considerably during the past year due to alternate accommodation being made available in the Emergency Camp to which many families have been removed.

There is an improvised service where refuse is removed from selected collection points.

(b) Raincoat

This settlement has for a considerable time caused this Department the most concern of all.

Evaluated from a survey completed in 1951, the population is approximately 2,490 persons housed in 221 shacks of 971 rooms. This reflects a density of 11.2 persons per shack and 2.6 persons per room.

Because of the constant need of digging refuse holes and privy-pits and the restriction of alternate sites, the land between the shacks at "Raincoat" is in a disgustingly sick condition.

Arrangements are being pressed to start a refuse removal service here as soon as possible. Repairs to the only access road are a pre-requisite.

(c) Newtown.

This settlement comprises 106 shacks of 459 rooms housing 1,146 persons. Newtown is situated on the South West bank of the Umgeni River and is some distance from other shack areas. The occupiers are mainly Basutos and strict and constant attention is necessary to obtain any semblance of cleanliness.

The number of shacks has decreased over the year by the migration of inmates to other areas. Vacated shacks were razed by demolition squads, operated by the City Engineer's Department in co-operation with the Native Administration Department.

Owing to absence of access roads a removal service is out of the question.

The above conditions emphasise the extreme urgency of not long delaying the rehabilitation of these unfortunate shack-slum dwellers in properly serviced communities.

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SOME RECOLLECTIONS OF PUBLIC HEALTH WORK IN DURBAN

by

R O B E R T W A L K E R
(Former Chief Health Inspector of Durban)

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PUBLIC HEALTH DEPARTMENT

At the beginning of the century, the position of Medical Officer of Health for the Borough was occupied as a part-time service by the late Dr. S.G.Campbell, one of the leading medical practitioners in the town. A popular and busy doctor, we may presume that his responsibility to the Town Council was mainly advisory.

The Sanitary Department comprised the Chief Inspector of Nuisances with seven assistant inspectors together with clerks, overseers, farriers, wagon builders, painters, tinsmiths and a large number of Indian labourers. (Mr. A.Kelso is the sole survivor of that staff).

The Chief Inspector, the late Mr. W.C.Daugherty, had been seconded from the position of Inspector in the Borough Police to re-organise the Department, and so successful had been his efforts in that direction that he was never allowed to return to the Police. Indeed, he was so much appreciated by the Council that when difficulties arose in other departments he was frequently instructed to assist in straightening them out.

In this way the management and control of the cemeteries and Indian barracks ultimately became part of the duties of the Department.

In 1902, the Council, on the advice of Dr. Campbell, decided to employ a whole-time Medical Officer of Health and Dr. P.Murison, then County Medical Officer of Health for Sutherlandshire in the north of Scotland, was appointed. Before taking up public health work, Dr. Murison had been a successful general practitioner in his native city of Dundee, where he had been for a considerable time a member of the Town Council. This experience was, no doubt, been useful when he came to serve as an officer of a Council.

Shortly after starting duty, Plague broke out in Durban, and the doctor had the misfortune to be bitten by a flea while inspecting infected premises. Dr. Daugherty, who was with him, urged drastic treatment but the doctor was sure he would be all right. He was wrong for, in due course, he developed Plague but, fortunately, it was a mild attack and he was one of the lucky few who recovered at that time.

Emergency staffs had been organised to deal with cases of the disease, with contacts, infected premises and materials. These were jointly maintained by the Natal Government and the Town Council, but the Medical Officer of Health's personal staff consisted of a typist and an Indian messenger.

After his recovery from the disease, Dr. Murison recommended, and the Council agreed to the appointment of two qualified and experienced Sanitary Inspectors. There were, at that time, few if any in South Africa and applications for the positions were invited in Britain. There was, at first, a keen desire on the part of young inspectors to get the opportunity of service in a fresh field, but a rumour, grossly exaggerated, that people were dying like flies of Plague in Durban, cooled off the enthusiasm of a good many. Eventually, the late Inspector A. Aitken and I were selected and duly arrived in Durban.

The Durban of those days was a very different place from the present modern city. Bounded by the Umgeni and Umbilo Rivers, the ocean and the Bay, and Ridge Road - roughly the watershed of the Berea hill - it was a compact and well defined area, but the Glenwood and Stellawood district from McDonald Road to Umbilo, and Morningside were still covered with dense bush. The beach frontage was sand back to the bush-covered sandy ridge and with the exception of the Beach Hotel entirely without buildings of any kind; nor were there any roads on the whole frontage, nothing but loose sand which made walking difficult and uncomfortable. The Bay extended to the line of the railway except at Congella where there was a salt-works, lime kilns, a dairy and a few dwellings which had replaced the mangrove swamps at that point.

The whole of the Maydon Wharf with its warehouses, railway marshalling yards, etc., was at best only a vision in the brain of the clever statesman who later had to fight long and strenuously to get his dream materialised.

The land now occupied by the Stamford Hill Aerodrome and various sports grounds, then known as the Eastern Vlei, was a large flat area of low-lying land drained by a wide ditch running down the centre from Stamford Hill to the Creek. This watercourse was known as Milne's Drain and was tidal along the whole length. The Vlei extended from the Old Fort to Caldwell's dairy - approximately on the position now occupied by the Airport buildings - and from the North Coast railway line to the sandy ridge where the Snell Parade now runs. The west side of that ridge rising from Brickhill Road between Victoria Park to the Old Fort Road was then mainly occupied by stables and Native barracks - all wood and iron buildings.

One of the partners of a firm having buildings there had some connection with Portuguese East Africa and used to get Native labour from that territory and it was said that jigger fleas abounded among the Natives housed there.

It will surprise many people to learn that a collection of wood and iron barracks and stables, devoted to the sanitary services, were then situated on the fine lawn at the lower end of the present Robert Jameson Park.

There were no flats in Durban then though a closer occupation of sites by the building of semi-detached dwellings was already in full swing. Even then, in many of the little gardens there were orange and lemon trees, and the fruit was so plentiful that usually there were lots lying on the ground under the trees. You would have to cover a lot of ground to see that now-a-days.

The land occupied by the Technical College and the Market buildings was then a dumping place for rubbish and was swampy along the lower edge. A former City Surveyor told me that the Market site was originally named Lot 'Crocodile Pool'.

A census taken by the Natal Government in April 1904 showed the population at that date to be:

Europeans	31,302
Coloureds and half-castes	1,980
Natives	18,929
Indians	15,631
Total	67,842

In November, 1907, the Council ordered the Chief Constable to conduct another census of the Borough. The result showed that with depression following the Boer War there had been considerable decreases in the European and Native populations, but there had been a slight increase in the number of Indians.

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It will be interesting to compare the figures of 1954 with those above, although having regard to the great enlargement of the Borough area in 1932, the Durban of the present-day is a vastly different town.

OFFICE

At the time of our arrival, the only records of vital statistics were kept in ordinary hand-ruled foolscap books. The copies of registers, forms, etc., I had brought with me from Paisley were adopted for departmental use, and a competent male clerk, also imported from Scotland, took charge of all official records.

PLAGUE

The following figures, extracted from the annual reports, explain more eloquently than any words can the fear and consternation with which the public of those days heard of an outbreak of Plague:

	Cases	Deaths
1902/03	174	124
1903/04	8	7
1904/05	28	22
1905/06	5	5
1911/12	32*	26

* 6 cases died outside the Borough but were undoubtedly infected within.

Naturally, the great majority of the cases occurred among Natives and Indians living under insanitary and structurally bad conditions. Ten cases occurred in the notorious Magazine Barracks in 1905.

The best protection for those living or working in infected buildings was the spraying of floors and other surfaces with a solution of paraffin emulsion to kill any fleas which might have left the infected rats when they died. Although, of course, the normal processes of disinfection were also carried out. The trouble was that people were often exposed to infection before the existence of the disease became known.

A well-known cricketer whose father was Governor of the Gaol contracted the disease in the 1912 outbreak. The Governor's residence was surrounded on three sides by the high brick buildings of the gaol, and the most searching inspection was made of the house and surroundings but no trace of rats was found. Across the grass-covered road on the open side of the grounds were Indian quarters in which several human cases and a number of infected rats were found. There seemed not the slightest doubt that the young man in question had been attacked by an infected flea as he passed along the opposite side of the street to or from his home.

Modern methods of rodent destruction have greatly improved since those days. Then, we had to rely on scratch teams of men from the unemployed and many of them were very unreliable unless kept under continual supervision. I think, also, that hurried attempts to exterminate the rodent population by trapping and poisoning, especially in the immediate vicinity of infected places where the vermin were already clearing out from their dead or dying fellows were generally futile.

Although not now in touch with these matters, I have no doubt that if we again have the misfortune to get Plague in the City (and with our extensive shipping connection with the East we can hardly expect always to get off scot-free), modern medical science will be able to provide protection to those exposed to infection, and do much to cure any who, in spite of that protection, contract and develop the disease.

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In those days, Natives feared hospitals and it was a very difficult matter to get them to consent to go into one. The Natal "Daily News" item - "This Day Fifty Years Ago" recently (January, 1953) mentioned that on the same date in 1903 about 16,000 Natives had fled from Durban in fear of Plague.

The first case of Plague I had to deal with was a Native living in barracks at Bamboo Square; he point blank refused to be taken to hospital and the other Natives living in the barracks demonstrated their sympathy with him by bringing out their sticks and talking defiantly. Someone fetched the Police, one of whom was an Induna who spoke English. With him, acting as interpreter, I endeavoured to assure the patient that there was no operating theatre in the hospital he was going to and that the treatment he would get would be solely to make him better. After a lot of talk, he consented to go with me provided I did not let the Indians (ambulance attendants) touch him. As the barracks stood on a bank about ten feet abouve road level, we could not take him down to the ambulance on a stretcher, and as he could only hobble on account of the 'buboes' in his groins, I had to take him with an arm round his waist while he had an arm round my shoulders. So we lurched and stumbled down the bank to the waiting ambulance. He was one of the few who recovered, and whenever he saw me afterwards he saluted me with a lusty "Inkoos".

I don't suppose the risk I ran of getting infected from him was as great as it looks. On that occasion, I had taken over duty for Inspector Aitken, who later contracted the disease and died in the hospital on Salisbury Island. That was a tragic event which deeply stirred the people of Durban, for his wife and family had sailed to join him here. An attempt to stop them was too late for the ship had sailed before the cable reached England. I spent the night before he was taken to hospital with him. Dr. Murison had gone to see him when he sent to report that he was ill, and was suspicious that it might be Plague. He could not leave him alone and untended in his room, so he had him removed to the hospital in the Back Beach Bush, where a nurse was living to pay daily visits to some Native contacts (not Plague cases) isolated in the non-European hospital. But he could not leave her alone all night with a patient who might be delirious, so he asked me to try and get a reliable man to stay at the hospital with her. It was then late in the afternoon and I could not get anyone I considered suitable for the job. So I said that I would go myself. Poor Aitken! He was very little trouble and by morning the doctor had no doubt about the diagnosis. Aitken was quite conscious but very despondent, and when I tried to cheer him he told me he knew he would never come back from the Island.

I got one scare in the 1912 outbreak. It was on a Sunday morning at the beginning of the outbreak. The old Natal Public Health Act had lapsed, and there was difficulty in finding any legal authority to handle the outbreak. Mr. Percy Binns, Chief Magistrate, came to our office to discuss the matter. There were present Dr. Murison, Dr. Haden, Mr. Daugherty and myself. Mr. Binns was able to find an old Act which he felt would serve our purpose, and after he left the rest of us went up to Burman's Store at the corner of Grey and Leopold Streets where dead rats and one sick one, discovered the previous day, had been found to be Plague infected. While looking round, I found a flea sticking in the crease on my right wrist. I promptly squashed it, at the same time telling Dr. Haden. He told me to keep squashing it, while he looked round and found two pieces of glass between which he took it away for examination. That arranged, I asked him to take his knife and make a cut above the crease to let possibly infected blood out, but he said "Suck it, boy", which I did. Later, the doctor told me the flea had undoubtedly been infected, but except for a few anxious days, I was none the worse for the adventure.

In August, 1904, while a concert was in progress in the old Town Hall, our disinfecting gang with Indian labourers was busy in the basement underneath removing rubbish and cleaning up following the finding of

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dead rats. The work was held over until after nighfall as it was felt that to have carts drawn up at the Church Street entrance to load up the rubbish in daylight would have caused alarm. While the work was in progress, a deep hole in the ground was found and, on dropping a stone, the sound of a splash in water was heard. As that might be a drinking place for any rats, a chunk of cyanide was dropped into the water. The sequel to that incident occurred recently when during an interruption to the water supply in the central area, the Post Office caretaker mentioned to some one that he had found a well under the post office from which he had drawn good potable drinking water. Horrified at the possibility that people using the water might be poisoned, I got in touch with the Acting City Medical Officer of Health, Dr. English, and told him of the poisoning of the well in 1904. He immediately telephoned the Post Master and asked him to have the wall sealed off so that the water could not be used.

It was believed that the well had been sunk by Captain Alan Gardiner long before any building had been erected there, and as it was probably fed by underground seepage slowly flowing towards the Bay, the dissolved cyanide would very gradually have filtered out of the well. The water was probably as good - and safe - as the caretaker thought, but it was an alarming time for the only one who remembered the dropping of the cyanide into the hole in the ground in 1904.

There was no question of overtime in those days, and the only consideration was the completion, as far as possible, of work necessary to arrest the outbreak and eradicate each centre of infection. For instance, oh that Saturday night, our men did not finish work under the Town Hall until nearly midnight, and they had been at work under the old Post Office floor (later to become a cinema) until about 9 o'clock the previous night.

Shortly afterwards, Plague broke out in the former printing works of the 'Natal Mercury' and our men did not finish work there until about ten on a Sunday night. I have good reason to remember that for the trams had stopped running and it was raining heavily. I have always disliked the idea of using a human-being as a transport animal but that night I broke my rule and took a ricksha. He did not get far up Berea Road before the poor devil pulling the ricksha got so distressed that I could not bear to hear him puffing and blowing so I paid him off and walked the rest of my way home in the rain.

One of the 'Mercury' reporters contracted the disease at that time. He was lucky and recovered after a spell in the hospital on Salisbury Island. The men working on the production of next day's 'Mercury' were also lucky for none of them contracted the disease although they continued their work while our men opened up the wooden ceiling of the printing room to disinfect the concealed spaces and make sure that no rats were harbouring there.

As rat harbourage might be under wooden floors or above wooden ceilings, it was necessary to open up all such places in infected buildings to ensure that there were no rats hiding there and to disinfect the spaces.

The house of the Governor of the Gaol was old and in bad repair and there had been promises to build a new one for him but, like many other promises, they had never been implemented. Instead of pulling down the wooden ceiling, I had the iron roof removed which served our purpose equally well, but made the old place look such a shambles that the Government at last erected the new residence.

Rat-proofing of buildings is a very important factor in anti-Plague measures, and extensive structural alterations have been carried out on many premises at the instance of the Department. This is a matter that

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should have the careful attention, not only of Corporation officials but of architects, builders and tradesmen concerned in the construction or alteration of buildings. I recollect an instance where a well-known architect was instructed by the owners of certain premises in the centre of the City to consult with our Department on the measures considered necessary to rid the buildings of conditions which were favourable to rat harbourage.

At first, he was inclined to think this was beneath the dignity of his profession but on a joint inspection he gradually became interested and, later, was an enthusiastic supporter of the departmental advocacy of rat-proofing of buildings. He told me that his original estimate of the cost of meeting our requirements at the premises in question was in the neighbourhood of £1,200 - and that was long before the days of present high building costs - but he found actual costs had considerably exceeded that figure, and he asked for our support on certain extensions of his original plans.

Early in January 1912, a man died in a wood and iron cottage at the corner of Umbilo and Stellawood Roads. His fatal illness was of very short duration and he was not seen by a doctor before he died. It was therefore necessary to have a post mortem examination to ascertain the cause of death. The District Surgeon, who performed the operation, suspected Plague and sent specimens to the Medical Officer of Health for bacteriological examination, which confirmed the suspicion of Plague.

Enquiry elicited that the deceased had been a stevedore and, prior to taking ill, had been working at 'B' Shed. When this fact was communicated to the Port Health Officer he told the Medical Officer of Health that for some time dead and dying rats had been found in 'B' Shed but examination had failed to discover the cause of death. Soon after that, however, positive cases of plague infection were found among dead rats from that source examined at the Port Health Office. This established the existence of a Plague infected area at 'B' Shed, but the municipality had no jurisdiction in the Harbour Area.

A few days later, however, the Medical Officer of Health sent for me and told me that he had arranged to lend me to the Port Health Department to deal with the outbreak there. I would be in complete control and would be able to call for tugs, lighters, railway engines, vans, etc., in fact, the whole machinery of the Harbour Department, and the Customs Department would be instructed not to release any goods from the infected area until I gave permission. That was a big commission, but he added that in the shed were quantities of flour, bran and seed oats, which could not be treated for possible infection by any of the usual processes of disinfection. He himself did not know how I could deal with these goods without damaging them, but I would have all these facilities at my command and it was up to me to find a way.

Mr. Daugherty, who was present, interposed to say that it was unreasonable and unfair to place so much responsibility on one man but the doctor said: "Leave him alone Daugherty and we will see what he will do". Thinking over the problem, I went to the Point and met the Port Health Officer who called for the Assistant Port Manager and, together, we proceeded to 'B' Shed. Arrived there, he pointed out the flour, bran and seed oats laid out on tarpaulins on an open space at the end of the shed. He repeated practically in the same words what the Medical Officer of Health had said about the treatment of these goods and said that he did not know what should be done but was glad to leave it in my hands. He introduced me to two Customs Officers who were there in charge of the stuff and confirmed the instructions about holding it until I had given permission for its release.

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In the shed, he pointed out the case goods, casks of liquor, and in one corner some burst sacks of flour and a quantity of smoked snoek. He told me I need not trouble about that stuff as he had condemned it and he asked the Assistant Port Manager to have it removed to the destructor. Apparently, the doctor forgot about that incident for some time later, when claims were received for the value of that flour and snoek, I was asked for my explanation and was able to confirm Mr. McKenzie's statement that he had been asked (or instructed) to have it destroyed.

The first thing to be done was to get 'B' Shed ready for the reception of the passengers and baggage from the mail boat which was due to dock there on Sunday morning, so I collected a small gang and set them on to disinfect the external surface of the case goods and casks of liquor and removed them out of the shed as they were treated.

I had not been long there, when the owners or their representatives of the flour, bran and seed oats came and asked me what I was going to do with their goods and when they would be released. To both questions, I could only reply that: "I did not know". They then informed me that the Port Health Officer had told them that if they had these goods placed outside in the sun and turned over occasionally they could be permitted to take them away after a few days. This was news to me and I referred them to the Port Health Officer for answers to their questions. Later, the Port Health Officer came and confirmed their statements and I asked him to arrange himself for the release of these goods.

I felt this put me in a false position, and as my men had, by that time, completed the work of preparing 'B' Shed, I reported to my own Medical Officer of Health. He told me not to worry as I would probably be required very soon in our own domain, but to telephone to him next morning (Sunday). This I did from the Point, where I had gone to satisfy myself that everything was in order before the mail-boat berthed. He then told me that plague infected rats had been found in Burman's Store, and to my query if I would be required in the Borough Area, he said: "Come home".

And thus ended my brief spell of vast authority without having the opportunity to exercise it, but I have often wondered how the problem would have been solved if it had not been evaded.

TYPHUS

This disease does not appear to have reached Durban before 1918 or 1919 and the chief note of importance in connection with that outbreak was the resistance by Native males to the process of de-lousing. Generally, the Native is fond of bathing, but the objection was to the use of a special insecticide soap which had been prepared to rid them of lice. Some trouble-maker started a rumour that the use of that soap destroyed the masculine virility and anyone using it would never have any children. Eventually, the officials of the Native Affairs Department were able to persuade the Natives that this was absurd and the outbreak was quickly wiped out.

Only an experienced doctor could compare the degree of severity of the disease as it occurred in this district with the type that formerly occurred in Europe, but several of the patients I saw here were certainly not so ill as those I had seen in small outbreaks in Paisley before I migrated to Durban.

I have especially in mind one such group of cases which was typical of these outbreaks. On visiting a house where a case had been reported I found all six of the inmates very ill and more or less unconscious.

The doctor who had notified the case lived quite near so I went to his house to see him. When he saw me he said, "Hullo, Walker, what do you want?" "Will you please come up to ..... and tell me which of the people there is your typhus patient?" I asked. He was astounded when he heard all the people in the house were sick, and at once agreed to go with me. On the way there, he produced two big cigars and giving me one said, "Light up, if we are going at the risk of our lives into that house, we will at least have a run for our money". When we arrived, he first went round the outside of the house and opened all the windows as far as possible and told me we would wait for a time till the infection had been blown out of the house.

The accepted belief at that time was that in typhus the infection was in the patient's breath, and all those who had anything to do with the disease were warned never to inhale their breath while near the patient's face. While we waited, my friend, the doctor, told me that in thatched houses the infection was believed to lodge in the thatch, in consequence of which there were often recurring cases in such houses, and the only sure method of preventing them was to burn down the house, and that was the opinion of a skilled doctor only a little over fifty years ago!

Incidentally, the doctor found all the six inmates of the house had typhus. They were removed to the Isolation Hospital where three of them and one of the nurses who attended them died: four deaths out of seven cases.

It is a matter of interest to me that one of my recollections of these little outbreaks is of remarking to another inspector that all the people attacked seemed invariably to be heavily infested with lice!

LEPROSY

One hears so little about leprosy in these days that it is difficult to understand the fear of it that existed in the somewhat remote past. Possibly that fear of infection as well as improved sanitary conditions may account to some extent for the fact that in civilised countries the disease is usually very scarce nowadays for the unfortunate sufferers were so much shunned that the chances of infecting other people were generally very slight.

A former District Surgeon was reputed to be very clever in diagnosing the disease in the early stages and I had the opportunity of watching his procedure in a number of cases. These patients were generally male Natives and the doctor, having obtained a new pen nib, usually from a policeman as these examinations generally took place at a police station, made the 'boy' look away from him and proceeded to scratch the anaesthetic patches on his back. In such cases, the patient did not feel the scratch.

In more advanced cases the condition of the fingers and toes and the leonine facial appearance made the diagnosis easier, but it was generally confirmed by bacteriological examination.

One day, while making an inspection at a Coloured school, the appearance of one of the Natives employed there made me suspicious, and, on having him removed to our office, the M.O.H. confirmed my suspicion that he was suffering from leprosy. He was removed to the leper location in Zululand, from which he escaped twice, but he made the mistake of returning to Durban and on each occasion he was picked up by the police for some minor offence, and his appearance led them to submit him for medical examination. On the third time, he was sent up to the Pretoria location.

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On investigation of his history, it was found that prior to working at the school he had been employed at a nursing home and before that at a dentist's rooms. The dentist could not identify him by name but, on asking another old Native in his employ, this boy immediately described the facial appearance that had first attracted my attention.

On one occasion, the late George Whyte, Estates Manager, and I were looking for a suitable piece of land for animal burial. Near to Brickhill Road extension in a large clump of sunflowers, we found an old Indian occupying one of those cubical iron tanks which formerly were quite plentiful. He had the typical leonine facial appearance and later was declared to be a leper on medical examination. He said he had been living in the tank for about nine years and admitted he knew he had leprosy. His 'abode' was near a row of wood and iron buildings occupied by Indian families who, with the characteristic charity of these people for the sick and aged, had probably been feeding him from their own scant supplies.

On another occasion, I found a Native woman, employed on the weekly wash of a well-known family in the Stamford Hill district, whose appearance made me suspicious that she was a leper. She lived at Avoca and only came into town for this one service. Nothing was said to alarm the family, but the Government authorities were advised and I believe my suspicions were confirmed by medical examination of the woman, but as the case was 'out of the Borough', I am unaware what happened to her.

MOSQUITOES, MALARIA AND DENGUE

In the early days of the century, people took the mosquito as inevitable in Durban's climate. They grumbled about the irritation caused by the pests and generally blamed the adjacent bush or the overgrown condition of their neighbour's premises. Few knew anything of the life history of these insects but their association with thick vegetation was generally recognised. Except for the very hardy or tough old-timers, most people slept under mosquito nets even in the winter months, and children were usually protected by them.

There were vague reports of occasional outbreaks of Malaria having occurred in the Borough but it was generally accepted that anyone having the misfortune to suffer an attack of the disease must have contracted it on a visit to some outlying district which was probably true in most cases.

Dengue was believed to be endemic and except for the annoyance was accepted as inevitable for most people during the summer months.

Then, in the early part of 1905, a big wave of Malaria swept down the Coastal Belt from Zululand to beyond Port Shepstone, and the people living in these areas had their first lesson in the part played by the mosquito in spreading the infection of the disease. Fortunately, its culpability in that respect had only a short time before been clearly proven by scientific investigation, though it was not always accepted, at least to begin with. I have a distinct recollection of a doctor contending most emphatically that the epidemic was due to the stirring up of the mud in the Bay by the dredging of the Maydon Channel which was then in progress, when it became apparent that many cases were occurring among people who had not been out of the Borough. The Medical Officer of Health submitted a comprehensive report with recommendations to the Town Council. One of the first steps taken was to make the disease notifiable, and in that way the Department learned which districts were affected and to what extent. Hand-bills were circulated in the affected areas advising the public how the disease was spread and the precautions which should be taken by householders. These included the collection and removal of receptacles which could hold water, the abolition of rainwater tanks, relics of a time before a Corporation water supply was introduced, and the control of vegetation adjacent to dwellings. Later, it became necessary to promulgate By-laws to enforce the carrying out of these and other precautionary measures.

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Many people were reluctant to part with their tanks as the soft rainwater was preferred for watering gardens and washing clothes.

A complete survey was made by the staff of the Department from which it was learned that swampy areas existed on the low-lying land between the foot of the Berea and the Beach and Bay all the way from the Ungeni to the Umbilo.

A mosquito brigade of Indians under European superintendence was formed and trained in spraying swamps with an oil film to destroy mosquito larvae developing in the stagnant water. In the winter months and at times when the gang could be spared from spraying, it was used to dig ditches to drain off water, to clean or deepen existing ditches, fill up shallow depressions where material was available, and to cut down bush and heavy growths of vegetation likely to harbour mosquitoes. Assistance in these measures was given by the Borough Engineer's Department, and then began the reclamation of low-lying and swamp areas with the refuse collected by the Sanitary Department. This will be described more fully under Refuse Disposal.

At one stage, the Government asked for the assistance of the Department in dealing with conditions in the Prospect Hall and Springfield districts where the Indians were suffering very severly from the epidemic, and an experienced overseer from our staff was lent to train the labourers to be employed in these districts.

Although the spread of Malaria was attributed to a variety of mosquitoes which bred out only in swamp areas, attention was given to all conditions favourable to the breeding of mosquitoes on private premises and in connection with buildings.

In course of time, nearly all the swamp areas in the Borough had been eliminated, and any that still remain are well guarded against mosquito breeding, but there will always be the places, usually on private premises, where carelessness or ignorance permits conditions to develop which make for the possibility of mosquito development. One such condition is still very widespread: during the Dengue epidemic of 1927/28, there were frequent complaints of the prevalence of mosquitoes in Congella Park. Careful investigation eventually led to the discovery of mosquito larvae in the cup-like formation of a plant called Bilbergia growing in the park. A regulation prohibiting the growing of the plant in the City was then promulgated.

What the position is, at the present time, I cannot say, but clumps of the plant can be seen growing in many gardens, even in Congella Park again. It is true that the cup is very small and does not hold much water, but there was no doubt about its possibility for mischief at the time of the discovery in 1928.

'Millions'

One little ally in the battle with the swamp breeding mosquito should not be overlooked. This is a little fish named 'millions', presumably because of its fecundity, and is a native of the island of Barbadoes, which is said to owe its freedom from Malaria to the presence of the fish in the streams and water-courses of the island. It is described as viviparous, the male about one inch, and the female one-and-a-half inches in length. It is a voracious surface feeder and where mosquito larvae are plentiful in the water, it is possible to watch one of these fish swimming about with a larvae in its mouth which it cannot swallow until it has digested those already in its stomach.

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In June, 1914, the Department received a consignment of 50 'millions' from the Stellenbosch hatchery. Mr. Wylie, curator of the Botanic Gardens, was asked to remove the gold fish from the brick-built tank on the upper portion of the gardens and the 'millions' were placed in the tank. They promptly disappeared. Some time in October, Mr. Wylie indignantly reported that the tank was swarming with mosquito larvae and no 'millions' could be seen. We had somewhat reluctantly to spray the tank, using paraffin; that disposed of the mosquitoes and soon after the oil evaporated, the 'millions' appeared and took control of the situation. They are still there in force and can be seen any sunny day. When the fish multiplied, we started placing them in any water-courses and swampy patches and, though we never completely discontinued spraying operations, there was no doubt that the 'millions' did keep down mosquito development.

When we had stocked all our own danger spots and the 'millions' continued to live up to their name in the tank, we let it be known that any person anywhere having swamp conditions on his land could obtain a supply of the fish on application. Many farmers and others took advantage of the offer and we had reports that they did all that was claimed for them.

Eventually we had to discontinue the offer as some people in outlying districts were not only anxious to get the fish but expected us to supply tins and send the fish by rail to them.

It might be worthwhile for the Union Health Department to investigate and find out if our experience with the fish still holds good.

Mention has been made of the salt works on the edge of the Bay at Congella. There was a considerable area of shallow water at that point and the procedure carried out was to form dams enclosed by sand banks. After evaporating for a time in the dams, the water was gravitated into the works where the process of manufacture of the salt was completed. Few people will believe that mosquitoes can develop in sea water, and that they could actually develop in water with such a high degree of salinity as that exposed in the dams will be considered incredible by most, but that actually happened on one occasion when one of the dams was found to be swarming with mosquito larvae. Apparently, the high amount of salt in the water did not affect them, and protected by the sand banking, there was no wave movement of the water and no fish to eat the larvae so, on that occasion at least, vast hordes of the larvae were developing freely until the bank was broken down and the bay-water allowed to flood the dam.

Although holes or hollows in tree trunks often served as breeding places for mosquitoes, there is no record of the banana plant being found to harbour the larvae. At least, not in Durban. Although close observation was maintained on clumps of the plants at that time when the Department was especially keen on wiping out all possible breeding places. I believe the American authorities prohibit the growth of the banana in the Panama Canal Zone for that reason.

BACTERIOLOGICAL LABORATORY

On the suggestion of Dr. Campbell, the Council had authorised Dr. Murison to select and bring out the rudiments of equipment for a bacteriological laboratory, and this was expanded from time to time. It was to prove of the utmost value in dealing with the outbreak of Plague which started soon after Dr. Murison began his duties as Medical Officer of Health. All dead or sick rats found were examined and, in this way, the earliest possible knowledge of any developments was obtained. The following table showing the number of rats examined will give some idea of the extent of the work:

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1903/04	613
1904/05	4,914
1905/06	6,599
1906/07	5,754
1912 outbreak	1,242

Specimens from human patients were also examined, and the first accurate information of the 1912 outbreak was obtained of specimens taken at the post-mortem on a stevedore who died suddenly; he had been working in an area at the Point where rats had been dying for some days before he sickened.

But examinations for other diseases - Enteric, Diphtheria, Malaria, etc. - were also performed, free of charge, for the medical practitioners, and this service was greatly appreciated and freely used.

Examinations of foodstuffs, of water, sewage, etc., were also carried out in the laboratory.

DISINFECTING STATION

We were at that time not very far removed from the old-fashioned practice of fumigating with burning sulphur to disinfect premises, bedding, etc. Indeed, I can remember expressing surprise to one of the leading County Medical Officers of Health in Scotland, and a highly esteemed authority on all public health matters, that his department still stuck to that method when all up-to-date authorities were using either formaldehyde vapourising outfits or spraying with formalin. His reply was that he was a great believer in the virtues of fresh air and soap and water, and the sulphur fumigation compelled the householder to open all windows and to give the whole house a thorough cleaning to get rid of the disagreeable smell.

One of the first moves was to establish a modern steam-disinfecting plant together with a laundry for washing clothing from infected premises. The laundry plant was probably among the first set up in town, and was inspected by various laundrymen when they decided to break away from the old hand-washing method. All bedding and clothing from premises where cases of infectious disease had occurred or been treated were laundered there free of charge.

The Department also carried out the laundering of towels, costumes, etc., from the Public and Beach Baths, and later for all Corporation Departments, and that necessitated the installation of additional plant to deal with such goods apart from materials from infected premises. When the disinfecting station had been established, the Council undertook to deal with all bedding, clothing, etc., from Plague-infected premises and the emergency plant was closed down.

Staff for the station was selected from the men who had been employed there, and vans and other useful equipment transferred to the Department.

HOSPITALS

The Natal Government had erected two wood and iron hospitals for the isolation of cases of infectious disease in the bush fronting the Beach, and these, with the responsibility for the treatment of infectious cases requiring hospital isolation, were handed over to the Corporation soon after the Council had instituted its public health department. That for European cases was situated in a deep donga behind the point where the pavilion was later built. The other for non-Europeans was near the present-day seaward end of Argyle Road. Both were deep in the bush, and as no

development of the Beach had yet begun, the only approach was from Brickhill Road.

There was an Indian caretaker at each but no other permanent staff, European nurses being engaged when necessary. The wonder is that any were willing to go there for they were desperately solitary places with only monkeys and other bush denisons for neighbours. The caretaker at the non-European hospital several times used to complain of a large snake which swung from a branch of a tree overhanging the road leading to the hospital. As no other person ever happened to see the brute, it was thought that he was probably exaggerating and very little attention was paid to his tale. It may, however, have been quite true for one night a well-known townsman living in Gillespie Street was wakened by a commotion and the crashing of dishes in his pantry. On investigation, he found a large python and, with the help of his house-boy, despatched it. When he measured it in the yard next day, he found it was over 22 feet long. The caretaker never saw his snake after that!

Cases of Plague and Smallpox were treated in a hospital belonging to the Government on Salisbury Island.

Other accommodation occasionally used for the isolation of the less formidable diseases were some wood and iron dormitories at the former Boer Prisoner of War Camp, Congella, where the King Edward VIII Hospital stands. The former residence of the Camp Commandant, a wood and iron cottage near Umbilo Road, was occupied by a Corporation employee. In 1911, the child of a Johannesburg City Councillor on holiday here developed Scarlet Fever in a hotel in town. It was imperative to get her removed from the hotel without delay, and arrangements were made to have her nursed in that cottage. That was the start of what can be regarded as the nucleus of present-day hospital accommodation for infectious diseases.

Fortunately, cases which had to be removed to hospital were not very numerous in those days, and they were generally comparatively mild, so for a few years odd cases and the nurse or nurses caring for them were accommodated in the cottage. Later, proper wards with the necessary attendant accommodation - but still of the temporary wood and iron construction - had to be erected rather hurriedly to deal with the increasing incidence of infectious cases.

Dr. Murison had been agitating to get a proper infectious diseases hospital and eventually the Council agreed to the selection of a site: Umbilo Road was considered too near the residential area to be safe. Even a site in the bush behind the present Girls' High School found considerable opposition and was eventually abandoned. The next choice was on the ridge above Glenwood. It was outside the Borough, and the Council had to purchase the land. Had there been any road giving access to the site, a start might have been made on planning, even on construction, but delay again held back the start, and to-day most people will be glad for the site was eventually given to the University of Natal, and that is the position where the growing university is now situated.

After all the discussions and delay the hospital was erected on the original Umbilo Road site.

It should be mentioned that cases of Enteric and Dysentery, by far the most numerous of infectious diseases requiring hospitalisation, were accepted for treatment in Addington Hospital. Had such cases been regarded as unsuitable for a general hospital the Town Council would have been compelled to erect and staff a large hospital much earlier than that eventually built on the old site at Umbilo Road.

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AMBULANCES

Anyone seeing the fine fleets of motor ambulances provided and maintained by the Corporation, the Province, St. John Ambulance Association and Red Cross Society constantly traversing the City streets at all hours of the day and night might well be surprised to learn that the first of these vehicles to be used in the Borough was presented to the Corporation in October 1909 by the St. John Association.

Prior to that date, the nearest approach to an ambulance was a stretcher mounted on ricksha wheels and manned by a couple of Native policemen. These vehicles were kept at all the police stations and were generally only used for the transport of accidents. Ordinary cases of illness were removed either by carriage, cab or ricksha, and infectious cases in canvas-covered horse-drawn vans.

BAKERIES

It may seem almost incredible to most people that in 1903 the following conditions obtained in a bakery within a quarter of a mile of the town hall: the dough was kneaded in a large wooden trough standing on the floor by Natives wearing only shorts and sweating freely as they turned over the heavy mass; the oven was heated by a fire inside it, which was drawn out when the oven was hot enough and the bread was cooked by the heat which remained. There was no electric lighting in the bake-house and to enable the bakers to see to load the oven or take out the bread when baked, a stone ginger beer bottle with paraffin and a wick of tow was used as an illuminant. Was it surprising that our bread sometimes tasted of paraffin?

I believe our bakeries are now above reproach, and the only criticism I have to offer is in the method of delivery of the bread without wrapping. Possibly the insistence on complete and elaborate enclosure of the loaf has done much to hinder the adoption of a hygienic method of delivery.

Elsewhere, I have advocated a paper wrapper a little wider than the length of the loaf. This would leave the ends of the loaf open but my contention is that the risk of contamination on the ends is so slight that it could be disregarded. The danger comes from the handling. It appears to be a fairly common practice in tea-rooms, etc. selling bread, for the shopkeeper to wrap a narrow strip of paper round the loaf before handing it over. This may seem to meet requirements, but it does not, mainly for the reason that it is locking the stable door after the horse is gone. If the storekeeper can do it with single loaves why cannot the bakery do it in bulk?

Besides, the strip of paper applied in the shop is usually too narrow to be entirely satisfactory. The use of such a strip wrapper would be cheaper and more easily applied than a complete enclosure, and while keeping the bread clean it would allow the heat to escape, and let the purchaser see the kind of loaf she was getting.

Objections formerly raised to the wrapping of bread were that enclosing the loaf while it was warm would cause deterioration of the condition, and that many housewives in their desire to see what kind of loaf they were getting would tear open the wrapper and thus leave the bread exposed to contamination.

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MILK

With the exception of the one large dairy company which sold milk at their central premises and also made extensive deliveries throughout the town, most of the supply came from premises occupied by people who might most aptly be described as cow-keepers. This type, starting with one or two cows, kept for their own use, eventually found they had a surplus and disposed of a few bottles at first among their neighbours or friends and so gradually slipped into a regular dairy trade. One of the best dairy keepers of later times started in this way.

Mention has been made above of bottles, and it was this type of small trader who frequently sent out their milk in five gill bottles often stoppered with a wad of paper. Needless to say, those bottles were rarely, if ever, sterilised. Other containers in use were cans and, of these, there were two kinds: those with the lid left unfastened to enable the delivery 'boys' to dip out the milk and the other with padlocked lids and taps. The milk in the unsecured cans was, of course, liable to contamination not only by being opened but by the intrusion of the dipper or measure and the sleeve and hand of the delivery 'boy' which, even if clean, and frequently they were not, were never sterile. But this type of can was preferred by some dairymen because the action of dipping the milk was likely to keep the milk more uniform in quality by preventing the cream settling on top. This was the explanation sometimes offered to explain a deficiency in milk-fat, i.e. that as the sample had been taken in the early part of the delivery round some of the cream had separated out and later customers would get a richer supply. There was also the difficulty of cleaning and sterilising the tap. The dippers or measures were generally hung on the outside of the can exposed to contamination by dust and by contact with the clothing and person of the delivery boy.

Milk, and the morning newspaper, was frequently sold in butchers' shops: the cans with the milk standing in the shop window thus not only advertising the sale of milk but ensuring a measure of 'apartheid' from the meat, or so it was believed.

The Indian with his regard for the cow as sacred early invaded the milk trade. Unfortunately, his primitive ideas, or complete lack of them, on the subject of hygiene did not fit him, in the majority of instances, for the production of a foodstuff so susceptible to contamination as milk, and what was equally important his inadequate financial resources generally made it impossible, or at least difficult, for him to comply with the departmental requirements for people seeking licences to sell milk.

Consequently, many of these cow-keepers could only sell their products surreptitiously, usually under cover of darkness, or to a compatriot who had managed to get a licence. It was surprising the number of Europeans who encouraged this type of milk producer by purchasing from them, usually because they got the milk rather cheaper than that from properly licensed dairymen.

Most of these Indian cow-keepers had their premises outside of the original Borough boundaries, and were therefore not subject to any inspection of their premises and stock except in the case of the few able to reach our standard for licence. These, of course, were visited regularly by our dairy inspector and were gradually trained in the requirements of our departmental by-laws, but I believe the number trading as dairymen who were closed down when the added areas of the City were incorporated and gave us full access to and control of these areas, was 63.

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Probably in few trades engaged in the production of food was there a more incessant and strenuous struggle to enforce our standards than in the milk trade. Milking usually took place twice a day: the first time in most dairies generally about midnight. That necessitated the workers turning out in the dark and doing their work hurriedly to get the milk ready for delivery. Provided the dairyman was himself on the spot to supervise and control his workers, one could hope for attention to hygienic methods, but to turn out nightly at such outrageous hours was a hard life and it is not surprising that some succumbed to the temptation to stay in bed and leave the supervision to some trusted servant, and even the most trustworthy servants are liable to grow slack and careless if left to their own devices.

Not all employees became tricky, just as all dairymen were not careful and upright in compliance with the legal requirements and hygienic standards, but the milk delivery employee who discovered how he could make a bit extra for himself by adding a little water to the contents of his can was being subjected to a strong temptation for a lowly-paid worker. The dairyman who was faced with prosecution for having sold milk containing added water was ingenious enough to accept, and submit as an excuse, the statement of his 'boy' that in wading through some water on the roadside following a rain-storm the can slipped off his shoulder and fell in the puddle, was surely a big temptation to a poor Native.

One of the most artful tricks discovered by our Food and Drugs Inspector, who had failed to catch a Native carrier against whom complaints had been made of selling watered milk was as follows: Samples taken from him had been found, on analysis, to be genuine, in fact, good quality milk, but milk delivered by him on nights the samples had been taken were undoubtedly watered. The inspector secreted himself on one of the premises where the complaints had been most insistent and eventually had the satisfaction of seeing how the milk was adulterated. Instead of adding water to the milk the Native took the jugs left out by the householders to a tap in the yard and ran quantities of water into them. He than made up the requisite quantities with milk from his can. That finished his career as a delivery boy.

Many examples of such trickery could be quoted, but a couple from the other side may be interesting. One dairy-keeper, a woman, told a visitor that the cream of the milk from her cows was so rich that a spoon would stand upright in it. This came to our ears and a sample of milk purchased from her was found to be deficient in butter fat. Her indiscreet remark cost her a penalty of £5.

In one of the clean milk competitions run by the Department for medals awarded by the D. & C. Agricultural Society, a sample submitted for chemical analysis was found to be very much deficient in butter-fat. This, of course, completely spoiled the competitor's chances in the competition and, incidentally, rendered him liable for prosecution. On his own initiative, he took a sample of the milk from each of his cows and had them all analysed by a competent analyst. He brought the result to us and it showed that a quarter of the cows were giving milk deficient in different amounts in butter-fat. It transpired that all the defaulting cows had been bought from another dairyman who had had a Government milk recorder test all his cattle. Later, another dairyman whose milk sample was found to be deficient in butter-fat told us he had recently bought some cattle also from that other dairyman. Although unable to disclose the names of the men concerned in the earlier incident, we told him of it and suggested he might also have the milk from his individual cows analysed, but he was too apathetic to do anything so had to accept responsibility for the deficient sample.

Incidentally, the average quality of all the many samples of milk, good, bad and indifferent, analysed was about 8% above the requirements of the Food and Drugs Act. The best of all was from the lone cow of one Indian but she only gave a very small quantity.

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LAUNDRIES

Here again there has been a great advance from the methods of the good old days when most of the laundry work was done by hand by the Native washerwoman or Indian dhoby. Older residents will remember how the dhoby did his washing by slashing the articles of clothing, etc., which had been soaped, on sloping concrete slabs in his back yard. In the earlier days before we insisted on complete 'apartheid' of the living and working rooms, it was not unknown for them to serve a common use, and there was a story once of an inspector who was out making night inspections and who found the sleeping dhoby he had routed out of bed wearing one of his (the inspector's) shirts.

Perhaps the lowest form of the washing industry was that performed by the Native washerman on the south bank of the Umgeni River between, if memory serves, the Umgeni Railway Station and the present Athlone Bridge. These men lived in the typical Native huts close to the river in which they washed the clothing entrusted to their care. They did not iron the clothing and naturally any that was not ready for return to the householder at the end of each day had to be kept over-night in the boy's hut. Of course, the Umgeni was not then polluted to the extent of the present time but it was surprising how many people patronised these washermen who were actually licensed by the Corporation.

CEMETERIES

Stellawood, our principal cemetery, was opened for general use in 1906, but in the previous year a large number of Indians who were drowned in the big storm of May 31st and June 1st were buried in a common grave at the lowest point in the grounds.

Many people have criticised the use of this land, so admirably suited for residential purposes, for a cemetery, but it should be realised that when the Council decided to use it for that purpose they had very little choice for they were limited by the area of the old Borough. Besides, few, if any, visualised the rapid growth of the City, and it was thought that the 92 acres with which it started would serve the community for a very long time. Actually, it has served as a European burial place not only for residents of the City, but also for the many visitors and people brought to the City hospitals and nursing homes who died here and for residents of surrounding areas. For a time, it also received non-Europeans, but except for those who formerly purchased grave sites these can no longer be buried in it. At the present time (1953), operations are in progress for the extension of the cemetery over a portion of land outside the cemetery on the Ridge Road side which, I understand, will add another 9 acres to it. By terracing hillside areas formerly considered too steep to be used for burial purposes, practically every square yard of the whole is being utilised for grave sites. This is a very expensive method of providing ground but, without that, the limit of expansion would have been reached years ago. A visitor from another province once told me that if they had such a beautiful cemetery in her home-town they would be running buses to it just to let people see it.

Prior to the opening of Stellawood, the principal burial places for the town were those known as the General Cemetery, West Street, the Stamford Hill or Umgeni, and the St. Thomas' just outside the Borough. No trace remains of an earlier burial place, the old Point Cemetery, the remains from which were transferred to the West Street Cemetery in 1895. They were re-interred in a small block just inside the Theatre Lane entrance. A few old tombstones were also transferred and the Town Council erected a memorial to the Early Settlers in the middle of the block.

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The General Cemetery comprises several blocks originally granted by the Colonial Government for burial lands to the Anglican, Roman Catholic, and Wesleyan denominations, which retain their identities, the large general block (European), the Mahommedan block on the Brook Street side and a Hindu and Native block, a small Jewish and tiny Parsee blocks all on the Queen Street side. Mahommedan tradition ordains that bodies shall be carried on biers from the place of death to the burial place, although it was stated some time after Stellawood was opened that a well-known member of the Mahommedan community had obtained a dispensation - presumably from whatever Islamic authority which exercises control in such matters - to allow the faithful to use wheeled transport for the conveyance of bodies from the town out to that cemetery. However that may be, there is no doubt that Stellawood was never popular as a burial place with the Mahommedans who use every argument and stratagem to secure the right to burial in the Brook Street area, or other Mahommedan cemeteries in the incorporated areas of the City. As they do not bury their dead in coffins, the dissolution of the body is probably much more rapid than with Christian burial. This permits of more frequent use of the grave sites. In any case, the sandy soil of the General Cemetery area favours the quick disintegration of bodies so the use of grave sites owned in perpetuity is likely to continue as long as members of the family of the original purchaser wish to use them.

A few Hindu families continue to make use of family sites in their section of the cemetery, but I have never known any application for use of any site in the Jewish, Parsee or Native sections of the cemetery.

Anyone interested in the early history of the people of Durban will find many records of note in the memorials in this cemetery. Perhaps the most striking instance is the red sand-stone obelisk in the Anglican section which marks the burial place of the Hon. W. Stanger, M.D., F.R.C.S., Surveyor General of Natal, who died in 1851 at the age of 43. Alongside, is a slate slab recording the death, in 1850, of Henry John Bowen, M.D., who died and was first buried at Kefentrenfa near Durban: "which place he beautified and enriched with many rare and curious exoticks". He was re-interred in the General Cemetery in 1851. Near to these two graves is that of Thomas Baines, F.R.G.S., Artist and Traveller, who died and was buried in 1875.

Death is always the greatest tragedy to the bereaved. What then must have been the grief of the relatives of a family of six children between the ages of 2 and 13 years whose deaths took place within little more than a week in 1873. I believe they died one after another of diphtheria. Their graves lie together a little way along from the West Street entrance to the Anglican section.

By 1923, the authorities of the three denominational sections, the Anglican, Roman Catholic and Wesleyan, had not only sold all the available sites in their areas but had also used up the strips on the side of roadways and paths. When these also had been filled up the main source of revenue had dried up, and these denominational cemeteries became overgrown and tangled with weeds, etc. Mr. Harold Adlam, a member of one of the firms of undertakers, urged that the Corporation take over the control and administration of these sections as their condition had become an eyesore and a reproach. Acting on his advice, a report to that effect was made to the Council in 1923, which agreed to take over these areas but it took until 1925 and required the promulgation of an Ordinance by the Provincial Council to transfer the full authority and responsibility to the Corporation. The responsible bodies had agreed to hand over all funds and all plans, records, etc., appertaining to their respective sections. Only one denomination handed over any funds, and the plans and records were equally meagre and unsatisfactory.

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The Mahommedan section provides a striking example of the result of the lack of proper care and supervision of the layout of grave sites. Prior to the Corporation taking over the whole cemetery area, these people had apparently been allowed to run their section in their own way, in fact pretty well every man to his own taste and inclination. With the result that the enclosed grave sites are all sizes and shapes and laid at all sorts of angles to the boundaries and paths. But, whatever faults he may make in these respects, the Mahommedan always likes to keep the mounds on his family grave sites heaped up as if the burial had only taken place the week before.

On that point, care is taken in modern burial places to have all grave sites uniform and aligned on the gridiron pattern.

At one time, the chairman of the responsible committee, who had the artistic temperament and took his responsibility very seriously, strongly deprecated this rectangular and rectilineal layout of a new block in Stellawood and insisted on the stretch of road serving it being laid out in a nice artistic curve; the result was immediately seen in the small wedge-shaped areas between the grave sites, and the chairman had to agree to a reversion to the old-fashined grid-iron layout.

When incorporation of the outer areas took place in 1932, it was found that apart from the official cemeteries inagurated by the Health Boards and, I think all but one of the Boards had specialised in that communal necessity, there were numerous little burial grounds, all small, many of them family plots and few of them that could be approved as suitable as regards the size, plan, arrangement and conduct. I fancy there were over 100 to begin with, but many of them had to be closed down forthwith and a rigid control instituted over those allowed to continue in use. The Indians (Hindus) who were mainly responsible for these small burial places prefer cremation and other things - mainly cost - being equal will use that method of disposal of their dead in preference to burial, but the Mahommedan will not tolerate it in any circumstances.

During the Plague outbreak when all others, including Europeans, who died of the disease were cremated, the Mahommedan dead were placed in hermetically sealed metal-lined coffins and buried.

Partly due to the limited and rapidly diminishing facilities for earth burial, the practice of cremation has grown greatly since the erection of a modern type of crematorium at Stellawood, and circumstances are likely to enforce a much greater use of that method in the future. There is also a growing section of the community, apart from those whose experience has impressed on them the usual results of earth burial, who prefer this clean and hygienic method of disposal of the outworn husk of the personality.

MILITARY GRAVES: (STELLAWOOD CEMETERY)

Originally, a small block for the burial of soldiers and sailors was set out in a corner off Selborne Road and nearly opposite the upper end of Regina Avenue, but a rather cantankerous individual living nearby complained so bitterly about the firing of volleys and sounding of the Last Post at the military funerals, that the Council decided on a new site, fortunately much more pleasant and accessible on the ridge parallel to blocks E and F, and the remains of the few who had been buried in the lower area were transferred to the new block some time after the termination of the first World War. This new block was laid out for soldiers at one end and sailors at the other; the intention being that the burials of these two separate groups would be developed as occasion required from the two ends until they met in the centre. Some time before the beginning of the second World War, however, the open space between the two groups had been laid out

for civilian burials, and soon after the second War got going, it became obvious that more burial space would be required for military graves. This led to the first terrace being prepared just over the edge of the ridge from the earlier military block. This was, of course, for European soldiers, as it has always been the policy to keep European and non-European burial areas separate. There was plenty of space in the new cemetery at Hillary and it was decided to lay out non-European military blocks in that cemetery.

By that time, there were some prisoners of war in the camp at Clairwood and it occurred to me that sooner or later there would be deaths among these men, and we would be asked to find room for them. Obviously, public opinion would not, at that time, tolerate the idea of burying them among our own men, and though they were on the enemy side, they could not be buried in the non-European area. Here again, Hillary cemetery being new and almost empty provided plenty of space to lay out a burial ground for them apart from both Europeans and non-Europeans and the Council's approval for a block inside the main entrance was obtained. This had only just been decided upon when the first prisoner of war died and we were asked on a Sunday morning to find a grave site. Although the position had been approved, the area had not been surveyed but we managed to fix the corner and beginning of the whole block by the use of a tape.

From that time on, we had I think, another dozen burials in the block before the beginning of December 1942, when the sinking of the transport Nova Scotia off the Zululand Coast brought a considerable number of bodies from the sea for burial. So far as could be ascertained, all these bodies were of Italian prisoners of war. On the surface, the new block seemed eminently suitable as burial ground. Some large stones had been encountered in digging the earlier graves, but these had been removed without too much trouble. When a start was made for digging for the mass burial some boulders of rock too big to be removed in one piece were encountered and had to be broken with drills. The compressor was brought into operation on a Saturday and worked all day on Sunday. There was some complaint of the noise from a few residents in the neighbourhood, but the work was urgent and had to go on in spite of their protests. We had not enough of our own labourers to do the digging and we applied to the military for assistance. On the Saturday and Sunday, we had three relays of troops (Europeans), 50 men in each, working for four-hour spells from 8 a.m. to 8 p.m.

With one of the groups of 50 marines, was a handsome young blond, very fair skinned, Captain, an Irishman, and presently I found he had peeled off his shirt and wearing only a helmet, shorts and boots, was down among his men wielding a pick. I pointed out that the strong December sun would blister his skin but he would not be dissuaded from his spell of exercise. I'll bet he suffered for his folly by night-time; he was on the 12 noon to 4 p.m. spell.

I don't know how long the bodies had been in the water, but decomposition was fast setting in and one of the Coloured troops carrying coffins was wearing a gas mask. When I drew the attention of the Roman Catholic priest, who was officiating, to this he thought it was an excellent idea and wished he had one for his own use.

REFUSE DISPOSAL

Before the 1905 epidemic of Malaria began, the town's refuse disposal was by dumping chiefly at two points convenient to the town; one was behind the junction of the Depot (now Somtseu) Road and where the Marine Parade now runs, and the other just over the edge of a knoll on which the Sanitary Department workshops were situated and, when the trenches were dug for the foundations of the Cumberland Hotel, quantities of fused glass

were exposed for, in those days, the rubbish was always smouldering. At the Umbilo Road site, the tramlines were extended on to the rubbish tip with the intention of conveying the refuse in bogie trucks on to the spot, but this method was never carried out and eventually the rails were removed.

I have a distinct recollection of the Medical Officer of Health telling the Inspector of Nuisances that it had recently been discovered that Malaria was spread by a variety of mosquito which bred in swamps and asking if he could utilise the rubbish to fill up some of the swampy areas. Mr. Daugherty enthusiastically agreed and thus began the practice which has resulted in the reclamation of many acres of land, not only useless and unsightly but potentially dangerous to the public health.

The first part tackled was the lower half of the area now occupied by the Technical College. All the bad patches of land in the Old Borough have long been reclaimed, and following incorporation of the Outer Areas into the City, considerable tracts of low-lying ground have also been filled up. Among the principal tracts of land reclaimed in that way are the lands on which the City Markets are built, the lower part of the Botanic Gardens, with the adjoining strip extending to the Indian Sports Ground, the Mansfield Road School's playing grounds, Kingsmead, Hoy Park, the Technical College Sports Grounds, and the Native recreation grounds at Somtseu Road.

All these grounds being close to the central town and residential districts were very convenient for this system of refuse disposal, and had the great merit, in the eyes of the Council, of being a very cheap means of removal and disposal.

At the beginning the rubbish was simply dumped and levelled, but as houses and other buildings were erected in proximity to the dumps, covering of the rubbish with clean soil, spraying of rubbish with insecticide and other measures to prevent fly-breeding, rat development and to combat nuisance and offensive conditions were gradually developed.

Mention should have been made of the Refuse Destructor at the Point which still plays a part in the disposal from a small area contiguous to it, in the destruction of some materials, etc., which cannot be deposited on a tip and in the incineration of official and private books and papers. For these reasons, it will always be necessary for the Council to maintain an incinerator of adequate size and efficiency to cope with goods which cannot be dumped but the existing plant is, and has been for a long time, admittedly obsolete. Many people aware of the important part played by modern incinerating plants in the disposal of City refuse in other parts of the world have agitated for the provision of such a plant for Durban, but there is a great difference between the nature of the domestic refuse produced in towns and cities where the great majority of houses still use coal-burning fires, and where the refuse contains a considerable proportion of combustible cinders; once started, the furnaces of such a plant are not only capable of burning most of the domestic rubbish, and much of that produced in trade and industry, but in some places have in the process produced enough electric current to run the plant, charge the whole fleet of vehicles used in the collection of the refuse, and even have a surplus for other purposes. And another by-product, the clean hard clinker, has been used for filters, and for the manufacture of paving slabs, etc. But the refuse produced in Durban houses contains, with the exception of paper, so little combustible material that the addition of much coal or other fuel would be required to consume the rubbish.

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The war compelled many cities and towns in Europe to take a more practical and sensible view of the contents of their refuse bins when it was realised that much useful, even essential, material was being thrown away as useless waste.

A start has been made in Durban to recover materials of some value from our rubbish, and to make compost from some of the organic waste which for so long has been buried in the tips, and it is hoped that this practice can be developed to a much greater extent. Some pig feeders have found the food waste collected from hotels and boarding houses a cheap means of adding to the food for their stock. From the same sources, considerable quantities of bones are retrieved, but most householders are careless about such inconsiderable trifles, and it is not practical for the men working at the tips to collect them all out of the vast quantities of rubbish dumped daily.

If householders could be induced to retain these - and other potentially useful materials - for separate collection, a valuable addition to stock feed and fertilisers would become available with another little source of revenue to the Corporation.

Many years ago, an enterprising individual arranged with some hotels, to keep their spent tea leaves for him. These he collected, dried and coloured and put up in packets for sale, but his misguided efforts had a very short run before the Department got wind of his activities and hauled him before the Court. It is not suggested that his example should be emulated, but the vast quantities of waste materials collected doubtless contain much that can be profitably - and legitimately - exploited.

DISPOSAL OF DEAD ANIMALS

In the days when practically all transport was horse-drawn, at least in the towns, the removal and burial of dead animals necessitated the provision of a specially constructed cart for the removal of carcases of the larger animals. Now, I expect, the Department is seldom called upon to handle more than a dog or cat that has died in a flat. Once, the Department had to remove the carcase of a bear belonging to a circus and had our climate been in the frigid zone some one might have wanted to keep the skin. After that incident, one often visualised the possibility of having to dispose of the carcase of an elephant when a circus visited the town.

On one occasion, a lady called to ask if she could, in time, have the skeleton of a much loved dog which had been removed and buried by the Department. This was such an extraordinary request that I asked why she wanted it. She told me that she would get a Veterinarian to articulate the skeleton and have it mounted under a glass case. I tried to dissuade her from that gruesome idea but she insisted that she loved him so much that she wanted his skeleton always with her. I tried to persuade her to get another dog or a pup to lavish her affection on, but she was insistent and, finally, I said "Come back in six months' time and we'll see about it". I thought that in that time she would have thought better of it, but she was back in six months to the day. Then arose the difficulty of finding where in the animal burial ground this particular skeleton had been buried.

The overseer in charge of the Indian who had buried the dog was asked if he could find the skeleton and, in due course, he produced one which satisfied the lady.

SEWERAGE, ETC.

Comparison of the records of infectious disease, of maternal and infantile mortality and the general death-rate in the early years of this century with those of the present time will show the tremendous progress that has been made in the prevention of disease and the saving of human life. A great deal of the improvement is due to pure medical science and research but sanitary science has played a not inconsiderable part in controlling conditions inimical to health. So much one can gather from statistics, but fully to appreciate the improvement in living conditions, in comfort and decency, one must have lived through those early times.

In 1903, the sewerage system had reached the region of Currie and Bulwer Roads. All the Berea above that level as well as the more remote districts of Umgeni and Umbilo had only a night-soil service. It was recorded that the sewers were being laid at the rate of four miles per annum in that year, but the progress had risen to twenty-four miles in the following year.

True, most of the people living in the incorporated areas have still to suffer the inconvenience and unpleasant conditions inherent in the bucket service (the very ambitious scheme of incorporation and later the War hindered the development of water-borne sewerage) but the modern style of buckets of pressed steel in one piece with tight-fitting lids for removal, and housed in fly-proof structures, is a tremendous improvement on the very unpleasant conditions of the earlier days.

But when one speaks of any service of whatever kind it should be understood that it was for 'Europeans only', for the number of premises provided with sanitary accommodation for non-European servants and employees was very few and far between. For Native house-boys there was usually only some neighbouring piece of bush or overgrown land, and his polite synonym of 'hamba bush' was universally understood and perforce accepted. Can it be wondered, therefore, that such diseases as enteric and dysentery were rife and took a heavy toll in sickness and death of all sections of the community?

It was amazing how strenuous was the opposition, even from town councillors, to the demand for such provision for non-European servants. Perhaps there was less difficulty in persuading owner-occupiers of the desirability of providing accommodation for their servants if only because it robbed the servants of the excuse for leaving the premises and forgetting to return for long spells, but owners of rented properties had no such urge to waste their money on such fancy innovations and usually put up a stout resistance to official demands.

I remember a M.O.H. who greatly shocked his hearers by telling them bluntly that an attack of enteric was usually due to the ingestion of infection from the body of some person suffering, or who had suffered, from an attack of the disease!

In speaking of sewerage, it may not be out of place to refer to the question of house drainage. The arrangement which still obtains in many places was based on the archaic belief that such diseases as enteric and diphtheria were due to the inhalation of what was vaguely known as 'sewer gas' and was devised to prevent air from domestic drainage systems being discharged within an occupied building or near to any window or other opening in the building. This was arranged by the insertion of water sealed traps at various points on the discharge pipes and line of drain to the sewer and, by carrying all pipes into the air above eaves level, or at least well away from windows, etc.

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The traps on all interior fittings are obviously essential but many people think that traps outside the building are not only unnecessary but seriously interfere with the proper functioning of the drains by hindering the free flushing out of waste liquids and the flow of air through the pipes.

Such matters belong to the province of the engineer, but the health official has also a responsibility to the public, and he is entitled to put forward his views insofar as they affect his province. The break in the flush of wastes caused by the intervention of a trap not only results in the deposit of fat and filth inside the pipes but arrests quantities of dirty water within the pipes. These may provide food for cockroaches and other vermin in what are known as disconnecting traps which are situated at the base of waste pipes and are open at ground level; there is no doubt that they can, and do, provide breeding places for mosquitoes where premises are unoccupied or closed for any length of time.

I think the Health Department should endeavour to persuade the Engineer's Department to eliminate all traps on drainage systems except those on internal fittings, making sure however that all waste or discharge pipes are carried well up into the open air.

Incidentally, one would like to see architects arrange to dispose of these waste pipes in such manner as to obviate the unsightly conditions caused by these pipes on the outside of buildings vide the western end of the addition to the Telephone Exchange in Pine Street/ Commercial Road.

DURBAN: 1953